SATURDAY, APRIL 15, 1871.

ORIGINAL LECTURES.

TWO CLINICAL LECTURES

ON CASES OF UNUSUAL VASCULAR MURMURS WITHIN THE CHEST.

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LECTURE I.

I PROPOSE, gentlemen, to-day, and at the next lecture, to occupy your time with the consideration of two cases which are of somewhat difficult diagnosis. In this connection it is perhaps well for me to state once more what are the objects, and what the means of obtaining them, which are presented by clinical medicine as it is taught in this hospital during the winter term.

The subjects of clinical lectures are the diagnosis and the treatment of disease. Correct diagnosis is absolutely essential to successful treatment, since unless a disease is recognized, it is impossible to treat it intelligently. In acute diseases, let them be fevers or inflammations,—and these constitute the greater number,—the diagnosis is comparatively easy. It rests upon some one, two, or three phenomena, which are readily seized, and, in fact, can hardly escape observation. Thus, in the diagnosis of scarlet fever you have the duration of the prodromes, the date and characters of the eruption, and so on, all occurring in a regular order, and each symptom always presenting more or less the same aspect. In other words, upon the patient may be said to be written the name of his disease. The same is true of all other acute affections, even those which we have to investigate by physical methods. Their nature may be discovered just as readily; for example, no sooner do we find a crepitant rhonchus at the commencement of an acute disease of the lung than we know this organ is affected with pneumonia. Acute diseases are all so plainly indicated that "he who runs may read" them. Therefore their diagnosis is comparatively easy, and hardly enters into the instruction in clinical medicine as we are giving it here.

There is another reason why the diagnosis of acute diseases does not come before us under existing circumstances. We meet but once a week. It would therefore be impossible for us to observe the course and phases of such affections. They may change from hour to hour, and certainly will from day to day; of what use, therefore, would it be for me to exhibit to you diseases whose phenomena are so transient? Moreover, the danger of bringing persons affected with acute disease so far from the wards into a different atmosphere, and with all the excitements of a clinical demonstration around them, is so great that I am unwilling to expose my patients to it. Clinical teaching of acute diseases can be conducted only in the literal sense,—that is, when it is *bedside* instruction. The Germans have a very appropriate term for such clinical instruction as the present. They call a lecture-room of this sort an "ambulatorium,"—that is, its patients consist of those who are able to walk about.

To these remarks I will add another, which is that, although we have not, during your winter term, the opportunity of investigating acute diseases, of making their diagnosis, of watching their diurnal revolutions, of noting their duration and all the phenomena that accompany them from stage to stage, yet we have the facilities for doing that which, individually, we cannot quite so well do at the bedside as we can do here. In the investigation of chronic diseases some of the most difficult problems occur which it is possible for the physician to have placed before him. You have every facility of making such investigations. You have the result of the previous study by the lecturer before the patient is brought before you; you have the opportunity of seeing the patient thoroughly; and many of you are also enabled to verify the statements made by your teacher. All this gives this plan a certain advantage over any other mode of teaching.

The cases to which this method of instruction is most appropriate are chronic; and the peculiarity of chronic diseases, of whatever name, is this, that their phenomena are more or less irregular and uncertain. In acute disease, from the beginning you are able to determine, with a good deal of accuracy, that on such a day a certain change will take place, that on such another day another change will occur, and, on the average, at the expiration of a certain time the patient will be well, or a fatal termination will have occurred. But chronic diseases offer little of this regularity. They have no definite commencement, duration, or termination. You see, then, how difficult, on these grounds alone, the diagnosis of chronic diseases may become. More than that, chronic diseases in their commencement, and from the fact that they are chronic and run a long course, do not usually at first disturb the functions of the economy, and therefore they do not give rise to definite symptoms. Consequently, it is quite possible that a patient may have a very serious chronic disease of which he himself is unconscious, and of which the physician may not be aware unless his attention is directed specifically to it.

In the case that I am about to present to you, and in another case which I shall introduce at our next meeting, very interesting and perhaps very important phenomena have been discovered, which would have passed entirely unnoticed unless a thorough and systematic observation of the patient had been made.

CASE I. *History.*—George Stephens, æt. 69, white, a native of Philadelphia, admitted to the Philadelphia Hospital, December 3, 1870. His habits of life have been moderately proper and temperate. His nose is partially destroyed, possibly, as he states, by the shot of an Indian arrow in the Florida war, 1837. He has also had a large portion of his hard palate destroyed, and there are extensive cicatrices on the posterior wall of the pharynx, and the posterior half-arches are deformed and bound to it. He owns to having had a bubo forty years ago, and waxen kernels remain in the right groin. There are no nodes on the body at present, nor any recent syphilitic manifestations. He states that in 1865 he was exposed to wet and cold, after which his legs became stiff and painful, but he does not know whether the joints were affected or not. His feet have been more or less swollen at different times within the last three or four years.

Present condition.—His complexion is dirty; muscular development good; no emaciation; feet and legs œdematous and firm, and over the surface of them are several circular, dead-white cicatrices; skin quite normal to the touch; muscles of the extremities stiff and slightly painful on motion; hearing impaired, having suddenly become so after exposure to wet and cold thirty years ago; sense of smell entirely gone; that of taste nearly so. His appetite is good; tongue large, red, and moist; abdomen distended and resonant. Hepatic dulness extends from the sixth intercostal space to a point slightly within the margin of the ribs on the side, and an inch below the ribs in front. Spleen normal in size. Bowels regular. Respirations sixteen to the minute; no pain in the chest; no cough; development of chest good; percussion for the most part clear; breathing-sounds in general soft, but rather feeble.

The impulse of the heart is feebly felt; its movements are regular; percussion-dulness not increased,—at least not to the

left nor vertically. All the heart-sounds are normal at their usual points of greatest intensity. Below the right nipple can be heard the first and second heart-sounds, which are normal but distant; on approaching the sternum these sounds become louder, but are evidently of the same origin. Above and within the right nipple, an inch in each direction, there is a loud, blowing, slightly rough murmur, synchronous with the systole of the heart, which is much fainter on advancing towards the sternum, where it is scarcely heard. There is diminished resonance on percussion over a space of two inches in diameter, where this murmur is most intense, and in this space the respiratory sounds are but faintly audible. No heart-sounds are heard in the back. Pulse, 66,—full and strong; the radial artery feels firm, but not calcareous. There is no murmur in the arteries at the base of the neck, nor any venous pulsation at this place. The urine is normal in quantity, acid, contains no albumen, and has a specific gravity of 1020.

December 14.—The breathing-sounds are alike on both sides of the chest. The right side of the chest is slightly flattened in front, and the movements and percussion-resonance are in the same degree diminished. The superficial veins on the right side of the chest are prominent. There is no visible or palpable epigastric pulsation. The pulsation of the femoral arteries is normal. The pupils are of equal size.

December 16.—The patient can lie equally well on either side, and is not short of breath. There is greater fulness and greater pulsation of the vessels above the right clavicle than of those above the left. The murmur to-day is heard most distinctly between the third and fourth ribs, on a line one inch within the nipple. When the man exerts himself there is another—a systolic apex-murmur—generated, and this is transmitted slightly towards the left axilla.

December 30.—Pulse, 52, and regular. He has nausea, but no vomiting, and pain and some tenderness in the epigastric region. Throughout almost the whole of the epigastric and umbilical regions a sense of resistance to pressure is detected, the percussion-resonance is diminished, and a distinct pulsation is felt. On ausculting this space a shock is communicated to the ear, and a sound like the cardiac first sound is heard. This sound is heard to the level of the liver, above which it becomes associated with the rough blowing murmur previously described.

January 27.—During the last month he has become rather stouter, and neither murmur nor pulsation can now be detected in the abdomen. The liver appears to extend about an inch below the edge of the chest, on the line of the right nipple.

What, then, are the points in the history of this case which will tend to lead us towards a correct rationale of the murmur which is heard on the right side of the chest? In the first place, you have a history of a rheumatic seizure, which indeed was preceded by—and, according to the judgment of Dr. Hand, the resident physician who took these notes, indicated the presence of—syphilitic disease, which, however, has been entirely cured. One thing is very certain, that, as there has been no active sign of syphilis for more than thirty years, we may exclude the idea of a syphilitic element in the disease of recent occurrence.

Leaving, then, this question of syphilis out of sight altogether, the most striking external phenomenon that remains in the case is the swelling of the legs. You have heard the peculiarity of this swelling described. It is very marked. The skin is hard; it is with very great difficulty indented by pressure. Now, œdema, when it is acute, sometimes assumes this character; when, however, it is chronic, it is not apt to do so. There is nothing, so far as I am aware, in the mere hardness of the integument in which the œdema exists to indicate the cause of that œdema. The swelling of the leg, you observe, is not sufficient to alter the usual form and proportions of the limb. The ankle and calf of the leg have their natural shape. There is, however, œdema, which, as you have heard, came on some years ago, soon after the man had caught cold by exposure. Whether or not he had rheumatism at this time is doubtful, because his intelligence is not very acute, and, moreover, he is very deaf, and it is not easy to communicate with him.

This swelling of the legs, however,—and a swelling which, from its history, had evidently been of long duration,—necessarily suggested the suspicion that the heart was the seat of some lesion of an obstructive kind, because obstructive disease of the heart gives rise to dropsy, which nearly always begins in the feet first; on the other hand, dropsy which begins in the face is nearly always associated with kidney disease. Now, it is quite possible that you may have both of these diseases together; but where they do occur, together in the great majority of cases, the heart is first diseased, and therefore the feet are the first to swell. In our case there is no suspicion of kidney disease; the urine is natural in its quantity and quality; and we are therefore thrown back upon the heart to explain this swelling of the lower limbs.

We examine the heart. We percuss, and we find that the area of its dulness is about normal. We feel its pulsations, and we do not find them excessive. We listen to its sounds, and we find them normal when the ear is applied over the organ after the patient has been at rest. But you know that I never content myself, when I find this association of symptoms, with listening to the patient's heart only when he is at rest. It is not a fair test at all. It is necessary to excite the heart, to cause it to move with more force and with more rapidity, to learn whether there is any obstruction in its valves; and therefore I caused this man to walk some twenty paces and return as fast as he could, though he cannot walk very rapidly, as he is old and somewhat stiff; and, by the time he got back, a very strong murmur was heard at the upper margin of the heart, above and within the apex, and towards the axilla. Such a murmur in this situation of course indicates mitral regurgitation,—and mitral regurgitation almost necessarily implies mitral obstruction; and therefore we have in the fact of this obstruction a sufficient explanation of the dropsy of the legs.

I might have been content to go no further in the examination, or in the reasoning connected with it. I might have said, "We have here a case of chronic dropsy with a mitral obstruction," and there the matter would have ended. But in all the cases I examine, wherever there is no insuperable objection, I make it a point to explore all the organs sufficiently to determine whether they are sound or whether they are diseased. Now, in examining this man's heart, it was necessary to determine, not only whether there was or was not a murmur in the heart, but a good deal more than that. Were all the sounds natural in quality? Were they natural in rhythm? Were they conducted in different directions? Did they preserve at a distance from the heart their natural qualities? Did they cease to be heard at a certain distance from that organ? In determining these questions by a physical examination, and also in examining the lungs, a novel and very interesting fact was discovered, and a problem was laid before me, which, if I cannot elucidate, I will at least state to you.

On passing the ear over the middle of the right side of the chest, I was very much surprised to find, at about the point which I here indicate with my finger, a little above the right nipple and slightly within it, a murmur. It was a blowing murmur, and, so far from it being necessary for the patient to use exertion and excite the action of his heart in order to generate this murmur, as was the case with the mitral murmur, it was heard all the time, no matter how quiet he kept. It was increased, it is true, after exertion, but it was nevertheless present while the patient was perfectly at rest, whether standing, sitting, or lying down. This murmur, too, was very evi-

dently systolic,—that is to say, systolic in relation to the heart; it was synchronous with the first sound and the apex-impulse of the heart, and with the radial pulse. Now, what is the mechanism of this murmur? What is there under that point of the chest to give rise to a systolic, rough, arterial murmur? That is the question; and you will see at once, if you recall your anatomical knowledge of the relations of this part, that it is a very difficult problem to solve.

Before dismissing the patient, I will ask you to verify the facts which I have read to you from the notes, so far as external inspection goes. You will notice the enlargement of the veins upon the right side of the chest. The external mammary veins are much more enlarged upon the right side than upon the left. There is noted in the history which I read to you that there is a little more flattening over this right mammary region than over the left. I am not convinced that that condition now exists. Moreover, I do not see that there is any difference in the movements of the two sides. Where this murmur is heard, there is a diminution in the percussion resonance.

Now, the questions are, What is the nature of this murmur, and how is it generated? You will bear in mind, from what has been said in the notes of the case which were read, that this is a murmur not directly derived from the heart, because between the point of its generation and the point where the heart-sounds proper are heard there is a space where hardly any sound is audible. It is very evident, therefore, that there is a local cause for this murmur. That is also proved by the fact that over the heart, when the patient is at rest, no murmur is heard, whereas the murmur in question is heard at all times,—more strongly after exertion, it is true, but it is never absent. Of course it is an arterial murmur,—that is, a murmur generated in or by an artery,—because it is coincident with the systole of the heart.

Now, what are the circumstances in which blood passing through an artery gives rise to a murmur? The circumstances are these, in one general proposition: whatever interferes with the flow of blood through the artery will occasion a murmur, greater or less. It is very evident that a roughness of the interior of the artery will do so; that a contraction of the artery will also give rise to a murmur, because it narrows the canal through which the blood is flowing, and therefore throws it into vibration; in the same way it is evident that pressure upon the outside of the artery will generate a murmur. In other words, to generalize the causes once more, whatever narrows the canal through which the blood flows with a uniform velocity will give rise to a murmur. Therefore, in our patient, something hinders the flow of blood in a vessel, and that vessel must be an artery.

What is the obstacle? Here we must refer to our anatomical knowledge. What arteries lie under the point where the murmur is heard? I show you distinct and accurate drawings of the heart, lungs, and vessels in the thorax. What are the vessels that lie where we have heard this sound? Evidently no arterial vessel lies there at all, except the branches of the pulmonary artery. The main trunk of that artery, as you know, divides and subdivides; and at the root of the lung, where the vessel enters the lung to be distributed through it, it divides into a number of branches, the largest being at the point where this murmur takes place. Now, it is very evident that something interferes with the flow of blood through that artery. What can it be? Is there an obstruction in the artery itself? Do you think it possible an obstruction within this artery could exist without occasioning more positive symptoms than are presented by this patient? Remember, he has no dyspnœa, no hurry of breathing, no difficulty of lying in any posture which he chooses to assume; he is not short of breath, and he has no œdema of the lungs. All or most of these things would necessarily occur if there was an interference with the current through this artery by external compression, or by an obstacle of any sort inside of the artery. I think, therefore, that this supposition may be laid aside.

Again, if the murmur is caused by pressure upon the outside of the artery, what can be the nature of that pressure? There is one form of disease of an artery which causes to a certain extent diminution of the arterial canal, and also, in one sense, pressure upon its exterior; and that is aneurism. Is there an aneurism at this point? I think not. In the first place, I would say that aneurism of this artery is so exceedingly rare that I have been unable to find a single case of it, and I have searched pretty diligently during the short time at my disposal. Again, if there were an aneurism, would it account for the peculiarity which you observe on percussion? You will remember that over this part where the murmur is heard there is evidently dulness on percussion, or diminished resonance, whichever you choose to call it,—because it is a matter of degree. If there were an aneurism sufficiently large to produce a small degree of dulness at that point, very certainly there would also be other signs; very certainly you would have an aneurismal thrill; very certainly there would be a complete annihilation of the respiratory murmur at the same point; very certainly there would be an elevation of the thoracic walls; and almost as certainly there would be very great difficulty of breathing, as there always is when an aneurism of the aorta presses upon the air-tubes. But nothing of that sort exists.

What other causes may possibly be invoked? There are only two suppositions which appear to me to be at all plausible: one is an enlargement of the bronchial glands which surround the root of the lungs, and, therefore, the vessels which accompany the root of the lungs; and the other is induration of the lung itself. Let us look at the last supposition first. In regard to the hypothesis of induration, we have in its favor a diminution of the resonance on percussion. But when we speak of induration, what do we mean? We mean, of course, the filling up of the vesicular structure of the lung. If the vesicular structure of the lung is filled up, it is very evident that we must have bronchial breathing. But we have no bronchial breathing in this case, and therefore I exclude peremptorily any consolidation of the lung. There are cases of consolidation of the lung other than those of pneumonic solidification,—of fibroid degeneration, for instance, which frequently occurs at the apex of the lung, but, so far as I know, never primarily in this situation. Looking, therefore, through the possible causes of induration of the lung which would press upon the pulmonary artery and give rise to this murmur, I do not see how, even upon anatomical grounds, any of them could exist in this case.

There remains, then, only the other single supposition, so far as my knowledge goes, and that is the possible enlargement of the bronchial glands about the root of the lungs. I cannot say why these glands should be enlarged in the case before us. I do not find any proof whatever of their enlargement, aside from the existence of the murmur I have been describing to you,—none whatever, except that and the dulness on percussion. It appears to me that the dulness on percussion is just of the degree which would be produced by a tumor of some sort underneath the lobe of the lung (which is here pretty thin, as you will remember), a tumor sufficient to compress it to a certain extent, but not sufficient to prevent all air from entering it. If such a tumor exist,—and we will suppose for the moment that an enlargement and induration of the bronchial glands does exist,—this glandular enlargement might press

upon the lung, might diminish the amount of audible respiration, and might cause, and probably would cause, just such a degree and such a kind of dulness on percussion as we have found in this case.

Such are the only suppositions which it appears to me at all possible to make with a view of explaining the riddle in the case before us. Whether they are entirely satisfactory is another question. I do not myself think that we have demonstrated the nature of the tumor, but I do think that the reasons I have suggested to you are sufficient to prove what the tumor is not, on the one hand, and, on the other, what it probably is. But I should be very slow to assert, or to stake my character or professional standing, or whatever I may have that is most valuable, that such or such a condition actually exists.

At the next lecture I shall take up the discussion of an affection within the chest, which I think you will find also interesting in itself, as well as because it is generally neglected or overlooked.

ORIGINAL COMMUNICATIONS.

ON THE EFFECTS OF CONIUM IN EPILEPSY.

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CONIUM, although not altogether a new remedy for epilepsy, has not been praised so much as other anti-epileptics, probably on account of the doubtful or insufficient strength of the extracts or tinctures of hemlock as hitherto prepared according to the different Pharmacopœias. Since the neurotic action of conia was prominently brought out by the experiments of Dr. John Harley, who has also shown that this principle bears the same relation to the ripe and unripe hemlock fruit as does opium to the ripe and unripe fruit of the poppy, we have endeavored to ascertain the true medicinal application of so valuable a remedy in nervous diseases generally, cautiously inquiring as well into its beneficial as its injurious effects. Our researches, therefore, extend over very dissimilar maladies; and the following examples have been selected from among those we have closely watched, daily, or more than daily, for nearly a year, in order to determine whether conium rendered a positive service in epilepsy. We have been so much impressed by the increased comfort and improvement of the patients, that the conviction has gradually forced itself upon our minds that conium possesses a great power to remove the irritability and depression which are common to epileptics, and that, while acting as a tonic, it is furthermore the safest narcotic that can, under the circumstances, be employed, and free from the ordinary evils of morphia, belladonna, etc.

We need scarcely mention that previous to the exhibition of conium in a manner which may appear, perhaps, too unrestrained, we have carefully tested the action of the preparations employed in every case, and continued or increased the quantity administered so long as it has relieved or benefited the patient. On the other hand, in pointing out the advantages attendant upon the use of conium in epilepsy, as compared with other nervines and narcotics, we have refrained from reference to cases where the irritability or other nervous derangement of inveterate epileptics, which seemed to outlive all other means of treatment, has plainly yielded to the daily use of conium, and deal chiefly with some typical instances illustrating the culmination of the physiological effects of conia. These effects are most important, and indeed the only reliable indications whereby we are enabled to recognize that the limit of the full action of the remedy has been reached. We must state, in addition, that in these researches we have employed preparations of the unripe fruit of hemlock, which, as already asserted, contains the most conia, or active alkaloid principle. We have administered, over and over again, the extracts and tinctures of conium of our Pharmacopœia, in extremely high doses, with hardly any evidences of those effects appreciable when using the English juice of hemlock obtained from the green fruit, or the fluid extract prepared from the fresh unripe fruit by E. R. Squibb, M.D., of Brooklyn, which has proved to be the strongest of the fluid preparations of hemlock we have as yet employed. We have also endeavored to study the action of conicine, but have been unable to procure reliable preparations of this substance, and the results so far obtained are too indefinite to be worthy of record.

Case I.—Female, aged thirty-seven, with epilepsy of twenty-five years' standing, attributed by the patient to intestinal worms. The fits occur only before the catamenia, in series of three to eight. Has petit mal; does not bite the tongue during the paroxysms, which are interchangeable with attacks of asthma, during which the patient usually remains free from spasms. She is reduced to a low state of general health. No epileptic fits have occurred for two months, but she has been suffering for some weeks from severe paroxysms of asthma, which have been somewhat relieved by the exhibition of succus conii (imported by E. Parrish & Son, Philadelphia), administered in doses of one ounce three times daily. In addition to the evidence of lesion of the respiratory tract in the medulla oblongata, she has weakness and anæsthesia in the lower limbs, and an eruption of large and painful furuncles on the right side of the face and neck, the right side of the tongue displaying also a slight follicular eruption. While suffering from a severe attack of asthma, she was given one ounce of succus conii at 4.5 P.M., four hours after eating. She had taken no bromide of potassium for two months previously. At the time of the administration of the medicine, the pulse was 80; respiration, 26; temperature beneath the tongue, 98°.

4.15 P.M.—Pulse, 80,—smaller and weaker; respiration, 26; temperature, 98°.

4.20 P.M.—Second dose of one ounce of succus conii given.

4.27 P.M.—Patient is drowsy, can scarcely raise her arms, and says that everything is dark. Pulse, 76,—small and weak; respiration, 26,—very irregular; temperature, 98°. Face flushed; pupils dilated.

4.39 P.M.—Complains of pain across the forehead; appears to have difficulty in collecting her thoughts and speaking; cannot rise from her chair.

4.45 P.M.—Has become still more confused; a third ounce of succus conii given. Five minutes after, the pulse is 99,—very weak; respiration, 40, and irregular. She cannot articulate; head falls forward and to the left; circulation in the limbs quite deficient; hands cold and bloodless.

5.5 P.M.—Respiration, 52,—shallow and irregular.

The patient then had a chill, and was placed in bed, when she immediately fell asleep. The effects began to subside at 5.30 P.M. The patient was very thirsty during the evening, and complained of muscular soreness and twitchings. Next morning the asthmatic trouble was much relieved.

Case II.—Female, aged seventeen. Epileptic since the age of five; cause, fright from the bite of a dog. General health good; habit of body very full. Her fits are extremely severe and frequent,—from twenty to forty a month when the patient is not under treatment,—and attended with epileptic insanity, or hysterical and cataleptic symptoms. The paroxysms have

been reduced in severity, and to an average of seven a month, by bromide of potassium, in doses occasionally increased to seventy-five grains. She was taking fifty grains of bromide thrice daily, when the juice of hemlock was given, to quiet her irritable and hysteric state.

First dose of one ounce of succus conii given at 4.5 P.M., her last previous meal having been taken at 12 M. The pulse was then 64; respiration, 16; temperature under the tongue, 98½°.

No appreciable effects were observed within fifteen minutes, at the expiration of which time a second ounce of succus conii was given.

4.37 P.M.—Patient feels heavy; complains of dimness of sight. Pulse increased to 98, small and weak, dropping a beat occasionally; respiratory movements increased to twenty a minute.

4.42 P.M.—Complains of pain across the forehead and great heaviness of the right side of the head; has double vision; pupils dilated.

4.45 P.M.—A third ounce of succus conii given. The pulse is increasing in frequency and weakness, still dropping a beat occasionally, and reaching 104 at 4.50 P.M.; respiration augmented to 26, and irregular; temperature, 100¾°.

4.59 P.M.—Patient cannot walk, but staggers and falls; circulation in the limbs very poor; hands cold and white.

5.5 P.M.—Respiration very shallow and irregular, increased to 32; pulse and temperature remaining as above.

5.20 P.M.—Patient walks with a staggering gait; her head feels light, and she complains of numbness in the right leg.

5.30 P.M.—The temperature has decreased half a degree, but the pulse and respiration remain at 104 and 32 respectively.

5.35 P.M.—Pulse 106,—very small and weak, intermitting occasionally; temperature diminished to 99½°; respiration, 32, as before. The patient is now very dull and sleepy, and fully under the influence of the conium.

The effects passed off in three hours, leaving the patient very thirsty, with twitching and feeling of weariness in the muscles, but very much quieter, and no longer hysterical.

Case III.—Male. Six days after birth he was seized with slight twitching of the face and rolling of the eyes, soon succeeded by convulsions of the limbs, which remained thereafter in a state of tonic contraction. The fits recurred every minute or two, with unabating frequency, for several hours during the day or night. He was restless, starting upon being touched, or upon any sudden noise, screaming during sleep, with very irregular action of the bowels. Skin hot, and pulse very rapid, symptoms which indicated very plainly the hydrocephaloid disease of which the infant died three months after the onset of these distressing convulsions.

Every remedy proved powerless to arrest even temporarily the convulsions and to quiet the infant, excepting the succus conii (from William Ransom, Hitchin, near London), given at first in doses of ten minims every two hours, and gradually increased to one fluidrachm, repeated every two or three hours, until the convulsions would discontinue with the narcotic effects of conia. Among the immediate changes noticed when the infant took twenty minims of the succus every two hours, were a lessening of the fits, with regular evacuations of the bowels, and an excessive secretion from the kidneys, urine being passed almost every hour. The frequency of the pulse and respiration decreased, the skin became cool, and the infant would sleep for five or six hours, free from fits and screaming, and with the limbs quite relaxed. A second or third drachm of the juice, exhibited two or three hours after the preceding, would show very strikingly the deficiency of the peripheral circulation, the pulse at the same time being much more frequent, but weaker, respiration hurried and irregular, and the hands and feet cold and bloodless. The pupils would become greatly dilated, with perceptible strabismus, the face flushed, the tongue dry, and the infant, when sleeping soundly, would be observed at times to move the lips and mouth in an automatic manner, as though sucking, or would be seized for a while with hiccough or vomiting,—these two last-mentioned phenomena always before the production of complete narcotism. In addition, the bowels would act but rarely, and the feces, white and hardened, would on their passage give the infant great pain. The maximum of succus conii ever employed was three fluidrachms within twelve hours, and the succus was administered in this manner, with occasional intervals, for several weeks. The infant, however, died in a severe fit, at a time when he was apparently less distressed, and had not taken the juice of hemlock for over a week.

Case IV.—Male, aged thirty-six. He had formerly been troubled with epileptic paroxysms, attended with mania, lasting two or three days, which first made their appearance during adolescence, and were attributable to no known cause. He passed over a year without any spasms, though occasionally subject to delusions and religious monomania, or to sudden absences, during which he would lose consciousness for an instant, though without suspending what he might happen to be doing. He had been using internally three drachms of succus conii (Ransom's), with thirty grains of bromide of potassium, three times daily, and had a seton in the back of his neck. Having remained for several weeks entirely free from the above-mentioned symptoms, he suspended the treatment and removed the seton. Thereupon the epileptic paroxysms recurred eight times in one day, rendering him towards evening very restless and excitable. He would not reply to questions addressed to him, but walked up and down the room, and did not seem to bear the light well. The pupils were much contracted; face flushed; tongue slightly coated and tremulous; pulse, 98, and full; respiration, 16; hands livid and tremulous, but not cold. He had taken no food, excepting some coffee in the morning.

One ounce of succus conii (Ransom's) was given at about 7 P.M., and the same quantity half an hour later.

8.30 P.M.—Pulse, 104, and much feebler; respiration, 28; pupils act more readily, and the intolerance of light seems to have disappeared. The patient is less indisposed to talk, and complies more readily with the requests of his attendant. Has ceased walking about the room.

9 P.M.—A third ounce of succus conii given. Ten minutes after he complains of great thirst, and says that the room seems dark. Pulse, 110,—weaker; hands look paler; eyelids are heavy. The patient passes about a pint of high-colored urine, and complains of a burning sensation during micturition. He feels tired, and every now and then dozes for a while.

10.10 P.M.—A fourth ounce of succus conii given. Pupils very much dilated; face flushed; patient complains of dimness of sight and pain in the forehead.

The natural appearance of the retina in this case having been previously observed on several occasions, an ophthalmoscopic examination was made at this time, for the sake of comparison. The optic disc was slightly and not uniformly reddened; the arteries were more distinct, and the veins much larger, than they appeared at a former examination, or at a subsequent one, made after the patient had completely recovered.

The effects of the fourth dose of succus reached their utmost degree in about twenty minutes after taking it. The pulse, very feeble, increased to 125; respiration, 34,—very irregular and hurried. The patient was still troubled with dryness of the throat, and was very thirsty, drinking freely of ice-water. Felt nausea, and had hiccough for about eight or ten minutes. Was very dizzy, and unable to stand or walk unsupported. The eyelids drooped; pupils very much dilated; face greatly flushed; extremities cold and bloodless. At 10.40 P.M. he was fully under the influence of conia, and asleep. Action of the heart regular and distinct, but not strong; profuse perspiration over the head and neck; occasional moaning for nearly an hour, after which the sleep appeared natural, and the patient did not awake until nearly eight o'clock the next morning. He then experienced a feeling of lassitude, or lack of muscular energy, and thirst, and the same burning sensation on urinating of which he complained the night before. Otherwise he felt easier, and completely relieved from the delusions and hallucinations which he said distressed him during this relapse. Subsequent treatment has confirmed the benefit of succus conii in high doses, the patient continuing with very rare attacks of absence, and without any delusions or monomania.

Case V.—Female, aged eighteen, with epilepsy of nine years' standing. Cause unknown. Grandmother and sister epileptic. Patient is scrofulous. Fits severe, and occurring

about ten times a month, but reduced by large doses of bromide of potassium to about two or three a month. Was taking forty grains of bromide of potassium three times a day, and, being very nervous, she was ordered half a drachm of Squibb's fluid extract of the fresh unripe fruit of hemlock, to be repeated every half-hour until sleep should be induced.

She took the first dose at 3.45 P.M.,—3½ hours after eating. The same quantity was given at 4.5 P.M., and a third dose at 4.35 P.M.

The pulse, respiration, and temperature were observed respectively as follows:

Time,—3.30	4.10	4.20	4.45	5	5.10	5.30
Pulse,— 82	82	84	84	92	84	80
Time,—3.30	4.15	4.35	4.50	5.10	5.30	
Resp.,— 16	20	20	20	20	16	
Time,— 3.30	4.10	4.40	5	5.15	5.35	
Temp.,—98½°	97½°	97°	97°	98°	98¼°	

The other phenomena were:

3.55 P.M.—Patient feels drowsy.

4.12 P.M.—Dropping asleep; head feels heavy.

4.15 P.M.—Cannot walk without staggering, and falls when she tries to turn. Her eyes are dim; pupils enlarged; face flushed.

4.22 P.M.—Cannot stand with eyes shut.

4.25 P.M.—Circulation in the extremities very deficient; complains of cold hands.

4.30 P.M.—Is very sleepy; does not answer when her name is called.

4.40 P.M.—Her jaw jerks, and is seemingly beyond her control. She is fast asleep.

6.15 P.M.—Has recovered almost entirely from the effects of the conia, only slight dimness of sight and staggering remaining; nervousness gone. In the evening she complained of sickness at the stomach and of burning pain upon passing urine. Density of urine before taking the extract as above, 1021; after taking the extract, 1013. Reaction acid in either case.

Case VI.—Male, aged forty-four. Has been a hard drinker, though he never suffered from any marked symptoms of alcoholismus. Has been affected for the last two years with epileptic vertigo, occurring several times a day, and succeeded by a peculiar feeling of unsteadiness in the limbs, which makes him stagger. Has never had spasms; is troubled with dyspepsia. Ophthalmoscopic examination shows nothing unnatural in the size of the blood-vessels of the retina or the color of the optic disc. Has been using three drachms of succus conii (Ransom's) and twenty grains of bromide of potassium three times a day, and two grains of ergotine in the morning and evening, with great relief. Upon discontinuing treatment for four days, the attacks of vertigo recurred in the morning with unusual frequency, rendering him very dizzy.

One hour after a light breakfast, at 10 A.M., he took thirty minims of Squibb's fluid extract of fresh unripe fruit of hemlock. His pulse was then 76 and irregular, not firm; respiration, 18; and temperature under the axilla, 98°. No vertiginous attack or other appreciable effect during half an hour.

10.30 A.M.—Dose of thirty minims of fluid extract of conium repeated.

10.38 A.M.—Begins to feel dimness of sight and parching of the throat. Pulse, 90,—weak; respiration, 18; temperature in the axilla, 94½. Is free from the unpleasant giddiness or swimming of the head which he has had all the morning, but complains of being still nervous.

11 A.M.—A third dose of fluid extract taken.

11.20 A.M.—Sees objects double; pupils dilated; retina congested, with blood-vessels much distended; feels drowsy and very thirsty. Pulse, 78,—very feeble; hands and feet bloodless and cold; action of the heart regular.

11.28 A.M.—Cannot walk or resist the inclination to go to sleep, and sleeps soundly until after 2 P.M. Awoke quite refreshed and cheerful, with an indescribable lassitude in all the muscles, while the other effects of conia seemed to have passed from the system. Ate some food, and relished it, but soon after had nausea and vomiting, but no further trouble. He continues to use half a drachm of bromide of potassium, with half a drachm of Squibb's fluid extract of the fresh unripe fruit of hemlock, three times a day, and two grains of ergotine morning and evening. Counter-irritation to the neck has also been regularly kept up, together with a tonic regimen; and there has been for over two months no return of the vertiginous attacks, which previously occurred several times every day.

We may briefly allude to another instance indicating that conia, like bromide of potassium, has apparently no unfavorable influence upon the progress of gestation.

Case VII.—Female, twenty-four years of age. Her first epileptic fit occurred in 1862, upon her being severely beaten by her stepmother. Prior to her admission into the Hospital, August 26, 1870, the fits usually occurred at night, and about twice a week. Her menses ceased two months before the latter date, when she became pregnant. She was ordered twenty grains of bromide of potassium, three times daily, with succus conii. The dose of bromide has been gradually increased to 40, 50, 60, 70, and 75 grains, three times daily, with one and a half fluidrachms of succus conii, which she has taken respectively in the months of September, October, November, and December. She had sixteen fits during September, eighteen in October, six in November, and only one fit in December,—occurring on the 1st. Notwithstanding the very large doses of bromide given at the above different periods, and the amount of succus conii uninterruptedly administered to the patient, the fœtus gives the usual signs of life, and the mother is in good general health, showing no ill effects whatever beyond a slight cutaneous eruption produced by the bromide. The same perfect absence of effect on the fœtus of large doses of bromide of potassium has been observed by Dr. Echeverria in three other instances. We propose further to ascertain how far the narcotic effect of conii will be shown by the child at its birth. Dr. Echeverria has seen recently a case where ten drops of Magendie's solution, injected hypodermically to assuage the pains of labor in a primipara, operated actively upon the child, which was born quite insensible, and in a state of narcotism lasting for a few hours. The same interesting effect of the hypodermic use of morphia during labor has been seen, on three or four occasions, by Prof. C. A. Budd, who has thereupon found the child to be born in a strikingly stupefied condition.

We have further had occasion, at the Hospital, to recognize the effects of conium in the cases of two epileptics upon whom trephining of the skull had been performed, and to whom the drug was given in order to relieve pain and produce sleep after the operation. To one of them Squibb's solid extract of conium was given (gr. ij) every hour, with an equal quantity of ergotine. (For details of case, see Echeverria On Epilepsy, p. 347, New York, 1870.) In the second instance, three and a half drachms of Squibb's fluid extract of unripe fruit of hemlock, with gr. viii of ergotine, were administered during the eight hours following the operation, and the effect was the production of a sound sleep, lasting eight hours.

We might add other examples of chorea, hemiplegia, locomotor ataxy, and myelitis, where we have tested the full action of conium, with the above-described results. We abstain from their repetition, lest it might become too tedious to the reader, or lest the medicinal value of conium in epilepsy might lose the prominence we wish to give it in this communication.

The ultimate effect of conia, as shown by Dr. John Harley, is to produce sleep. To induce such effect in epilepsy, conium must be administered in frequently-repeated doses. Ordinarily no quantity short of half an ounce of the English juice, or from half to one drachm of Squibb's fluid extract of the fresh unripe fruit of hemlock, will influence the nervous centres in any decided narcotic manner. The darker the juice, the more powerfully will it act. The utmost effect of hemlock becomes conspicuous in from twenty to thirty minutes after two or three ounces of the juice, or one or two drachms of Squibb's fluid extract, have been taken. Patients are met with, of course, in whom the maximum

effect is not induced unless such respective quantities are exceeded.

The operation of conia lasts from two to six hours, and then disappears, leaving no other traces than a sense of diminished muscular energy, in a few instances accompanied by nausea or hiccough, and, more frequently, by a burning sensation on urinating, both of which phenomena are of short duration. The nausea, hiccough, and double vision following the exhibition of large doses of conium are noted among the physiological effects of conium by Stillé (Therapeutics and Materia Medica, vol. ii. p. 262, Philadelphia, 1864).

It is important that we should remark—and in this our observations corroborate those already made by Harley—that the weaker and more inactive the epileptic is, the larger will be the quantity of conium required to affect him as a narcotic. And it is striking, as further asserted by Harley, that conium really operates as a tonic upon the muscular system. In this respect, conium, when not carried to the degree of paralyzing the muscular power, resembles in its action cod-liver oil. The fact is quite remarkable with epileptics taking three or four drachms of the juice, or thirty minims of Squibb's fluid extract, three times daily, for the irritability of the spinal system gradually diminishes, with notable improvement in their bodily condition. This tonic effect of conium is no less obvious in myelitis. We have in no case noticed that conium interferes with the sensory functions.

We have found the pulse regular throughout the operation of conium, but not of undiminished force and volume, as stated by Harley. Our observations lead us to believe that conia, from its special influence on the pneumogastric nerve, operates on the innervation of the heart with paralyzing effect, the internal sensibility of the organ being affected through the depressor nerve or sensitive cardiac branch, of Cyon, which accounts for the bloodless condition of the limbs, from contraction of the peripheral blood-vessels, when the full action of conium is produced. Conium, therefore, differs from bromide of potassium, which operates in a paralyzing manner mainly on the vaso-motor nerves. We are satisfied that the sympathetic system is primarily involved in the production of epilepsy, circulation being thereby deranged from the inception of the disease. Hence the advantage which may be derived from the judicious employment of remedies like bromide of potassium and conium, operating chiefly on the motor nervous tracts and the innervation of the whole circulatory system. We look upon cerebral anæmia, due to excitation of the arterial nerves, as the initial link in the chain of epileptic phenomena. The confusion generally made between hyperæmia and congestion explains why cerebral hyperæmia may be still considered by some writers as an etiological factor of epilepsy. Hyperæmia is a physiological phenomenon of short duration, depending upon stimulus and greater action of the venous system, whereby the flow of oxygenated blood is accelerated; whereas, congestion is, on the contrary, a morbid phenomenon, the result of vascular paralysis of more or less permanency, and causing stagnation of blood. Although the capillaries overflow, as we may say, in either case, hyperæmia is of such a transient nature that it cannot induce structural changes, which are, however, the necessary consequences of congestion. Excitation of arterial vaso-motor nerves causes anæmia, but such excitation, as just observed, is momentary; and, if prolonged, it soon paralyzes the arterial walls, congestion following thereon. It suffices, therefore, to bear in mind such teachings of the physiology of the circulatory systems, to understand how cerebral congestion must be, and is, so intimately associated with epilepsy, notwithstanding the occurrence of anæmia at the very onset of the epileptic paroxysm. The one—anæmia—is the initial, the other—congestion—the consecutive, phenomenon of epilepsy; both originating in a derangement of the sympathetic system.

Note.—The epileptic of Case VII. gave birth, on the 24th of March, to a very lively boy, who seems in no appreciable manner affected by the large amount of conium and the still greater quantity of bromide of potassium steadily taken by the mother up to the time of her confinement.

RUPTURE OF BRONCHUS OF WILD DUCK.

BY W. H. WINSLOW, M.D.

A MOST beautiful illustration of the conservative power of nature was afforded me recently by the bronchus of a canvas-back duck. The cook was preparing two of them for baking, when she noticed something abnormal in one of them, and called my attention to it. Upon examination, it was evident that at some previous remote period the left bronchus of the duck had been ruptured upon the outer side, where it joined the trachea at the bifurcation. The serious injury had been partially repaired by a pouch or dilatation of curious construction, about the size of a pullet's egg, and shaped like a cockle-shell, which enclosed the opening, but was itself incomplete opposite its attachment, where a round hole, a quarter of an inch in diameter, still existed. It was attached to the trachea and bronchus, much as a Malpighian corpuscle rests upon a splenic artery. This adventitious growth was very delicate and curious. A fine network of white fibres, starting from the edge of the rupture, ramified over the walls of the pouch in every direction, looking like the delicate frostwork of a window-pane in winter. Some of these fibrillæ led to the margin of the round hole, as if about to bridge it over, while others terminated upon the surface in microscopic lines. Between and upon this framework a clear, transparent, gelatinous, homogeneous, and continuous membrane was extended, inelastic and firm to the touch, and forming the walls of the pouch. Its origin seemed to be from the fibrous tissue of the bronchus, as I could trace the structure in between the coats of the tube. Upon blowing through the trachea, the air passed freely out of the distal end of the bronchus; but upon blowing into this end, the current of air passed mostly into the pouch, and probably in the living bird, from expiration, into the middle mediastinum, though a little passed out of the trachea.

I made a careful examination and comparison of the viscera of both birds, they being about the same weight, but found nothing abnormal. The lung corresponding to the ruptured bronchus was a little smaller than its fellow, or the corresponding lung of the other bird, but under the microscope there was no apparent difference in texture. All the other organs were apparently healthy. There was no emphysema of the chest or neck evident, though it must have existed during life. Probably the contraction of the tissues after death had expelled any air therein. Probably, if we could diagnose such a case in man, our prognosis would be exceedingly grave; yet in this wild bird life and health had apparently existed with the injury for many months, and repair had made good progress, until interrupted by the sportsman.

IODIDE OF POTASSIUM IN BRIGHT'S DISEASE.—Prof. Cryni, of Brussels (*Brit. Med. Journ.*, from *Wiener Med. Wochenschrift*), strongly recommends this salt, in large doses, in the second stages of Bright's disease. Favorable results by this treatment are also said to have been obtained by Drs. Baudon and Semmala, of Naples, and Dr. Caspari, of Meiningen.

RUPTURE OF THE LUNG

WITHOUT INJURY OF THE THORACIC PARIETES.

BY JOHN ASHHURST, JR., M.D.,

President of the Pathological Society, Surgeon to the Episcopal Hospital, etc.

Read before the Pathological Society.

T. S., an Englishman, æt. 32, of robust frame but intemperate habits, entered a tavern in Frankford (23d Ward) on the evening of Thursday, March 2, 1871, and there met with a party of idlers, some seven in number, who amused themselves by making him drunk. Passing rapidly through the various stages of intoxication, he finally became insensible, and in this condition slipped from his chair to the floor. The proprietor of the tavern now thought proper to interfere, and insisted upon the removal of the unconscious sleeper; he was accordingly carried or dragged away by his boon companions, who ultimately disposed of him by depositing his helpless frame in an empty milk-wagon which stood near. Here he was found at an early hour the next morning by the owner of the wagon, who, failing to arouse him, sought the aid of two policemen, who placed him in a wheelbarrow and trundled him off to the station-house, to sleep off, as they supposed, the fumes of his liquor.

It being found in the course of the morning that the man's right arm was powerless and very much swollen, a physician was sent for, who, after examination, sent him to the Episcopal Hospital. I happened to be in the house at the moment of the man's admission (about 2 P.M., fourteen or fifteen hours, therefore, after his fall from the chair in the bar-room), and perceiving that, although able to walk with slight assistance, he was suffering from severe shock and had evidently met with a serious injury, had him placed at once in bed, when his condition was found to be as follows:

The right arm was tense and much swollen, but, though lying helplessly by the patient's side, could be freely moved in every direction, being evidently neither broken nor dislocated. The radial pulse was quite distinct. A soft, fluctuating swelling existed beneath the pectoral muscle at the upper part of the chest, and invaded also the root of the neck, the line of the clavicle, however, not being obscured. The breathing was labored and shallow, but there was not much facial turgescence. *Auscultation* showed a complete absence of the vesicular murmur over the lower two-thirds of the right lung, with bronchial and even amphoric respiration, gurgling, and bronchophony. The vocal fremitus was diminished. *Percussion* gave a flat sound posteriorly, the line of dulness varying with the posture of the patient. There was no cough. The *pulse* was feeble and rapid, and the surface cold. The patient could give no account of the way in which he was injured, and, though answering intelligently when spoken to, constantly relapsed into a semi-unconscious state, with stertorous breathing. No fracture of the ribs nor other lesion of the thoracic wall could be detected, the only marks of external injury being superficial contusions and chafings of the shoulder, with the fluctuating tumor—evidently a hæmatoma—already mentioned. There was no emphysema. The diagnosis made was rupture of the right lung at its lower part, with effusion of air and blood into the pleural cavity, constituting the condition known to surgeons as *hæmo-pneumothorax*.

The next day (March 4) reaction was fully established: the dyspnœa was somewhat increased, as was the turgescence of the face; the patient, still somewhat soporose, was, when aroused, anxious, complaining of a sense of suffocation and of thirst. The *auscultatory* signs were as before, except that there was less gurgling, and, in addition to the previous sounds, marked metallic tinkling, with ægophony. The cardiac sounds were distinctly heard on the right side of the chest. *Percussion* much as before,—rather more dull anteriorly. The *pulse* was 108 and of moderate strength. There was slight gaseous distention of the stomach and bowels, with occasional eructation. The *urine*, very scanty and high-colored, was drawn off by the catheter. In the evening the pulse was 116, and the respiration 32.

March 6.—The patient was evidently worse. Intense anxiety, with dyspnœa and a sense of impending death. *Auscultation* gave vesicular murmur above (as before), with bronchial respiration, masked by a loud, creaking, friction sound over the whole of the lower part of the chest, but particularly well marked posteriorly. *Percussion* dull behind and laterally, but slightly less dull in front than at the last examination. No change in line of dulness on varying the patient's posture. Frequent eructation, with slight cough and expectoration of frothy mucus, but without the slightest tinge of blood. Bilious vomiting, and rejection of everything taken by the mouth. The swelling over the shoulder was more diffused, and was becoming consolidated. The arm had become extremely painful.

During the following night the patient became somewhat delirious, and died about 7½ o'clock on the morning of March 7.

A *post-mortem* examination, made on the afternoon of that day, revealed a small collection of fluid blood between the muscular planes in the supra- and infra-clavicular regions, the muscles themselves being very succulent and infiltrated with bloody serum. On carefully raising the anterior wall of the chest, the lower part of the right lung was found collapsed, and firmly bound down by a layer of organized lymph, mingled with blood. A space large enough to contain a small orange existed between the pulmonary and parietal layers of the pleura, both of these being covered with coagulated blood and organized lymph, which formed moderately firm adhesions between the lung and back of the chest, as well as between the lobes of the lung itself. The lungs and heart were removed with great care, and washed, when, by inflating the trachea, a small rupture was made apparent at the anterior edge of the lower lobe of the right lung. The lung-tissue appeared perfectly healthy, but the larger bronchial tubes had already become the seat of calcareous change. The left pleura and lung were normal, as were the pericardium and heart, the latter containing soft clots and fluid blood. The abdominal viscera were healthy, with the exception of the kidneys, which were congested, and presented (to the naked eye) a somewhat fatty and granular appearance. The cranial cavity and its contents were normal, except that there was some turgescence of the vessels of the pia-mater, with slight subarachnoid effusion.

The most careful examination failed to reveal any fracture of the ribs, or indeed any injury of the chest-wall, the parietal pleura, though covered with lymph and clotted blood, being, so far as could be ascertained, intact.

Remarks.—Rupture or laceration of the lung, except as the result of a penetrating wound of the chest or of a fracture of the ribs, is an accident which is seldom met with in civil life. I have appended to this paper references to all the cases with which I am acquainted. In military practice these cases are more often seen, as the result of injury by spent balls or pieces of shell, and are among the lesions which were formerly attributed to the "wind of a ball."

The *cause* of the injury (in civil life) has been usually the crushing or squeezing of the chest, as by the wheel of a cart passing over it. In only four cases is a fall mentioned as the cause, and in those a fall from a considerable height. Hence it is scarcely credible that this patient was injured, as asserted by his companions, by merely slipping from his chair; it is more likely that, in their not too sober efforts to lodge him in the milk-wagon where he was found, they dropped him on the ground, and pushed the wheel of the vehicle over his chest and shoulder.

The *symptoms* were sufficiently characteristic of the presence of blood and air in the pleural cavity, but there were certain symptoms, often well marked, which were in this case conspicuous by absence. Thus, there was no bulging of the intercostal spaces,—no lumbar ecchymosis,—no evident wave of fluid upon succussion,—and, on the other hand, no undue resonance on percussion. The explanation is to be found in the slight extent of rupture, and the consequently small amount of blood and air effused. The patient, moreover, was

not seen until enough coagulation had occurred on the surface of the parietal pleura to diminish the resonance even in that portion of the chest in which pneumothorax existed. The subsequent increase of resonance was evidently due to the hardening and contraction of the clot and organized lymph which surrounded the aerial accumulation.

The *mechanism* of the lesion in these cases is, doubtless, as pointed out by Gosselin (whose memoir on the subject is the best extant), that the chest is suddenly compressed while the lung is distended and the glottis closed by the patient involuntarily holding his breath; the elasticity of the chest-wall enables it to escape injury, but the distended lung cannot yield, and necessarily gives way.

The *prognosis*, though grave, is not necessarily unfavorable: the patients are usually young, and recovery is by no means impossible if there be no serious complication. Had the patient, whose case has been reported, been of sober habits, and with well-acting kidneys, and had he been put under surgical care as soon as injured, there is no apparent reason why he might not have recovered. The pulmonary laceration was slight, and was firmly sealed by the fourth day; and the amount of air and blood in the pleural cavity was so small that there would not probably have been any risk of the ultimate development of empyema.

The *treatment* of these cases does not differ from that of other wounds of the lung, and need not be particularly referred to.

In the following table those cases (sixteen in number) are put first in which there was *no* fracture of the thoracic parietes, and then those in which, though the ribs were broken, the fracture did not correspond with the seat of pulmonary laceration, and in which the fracture, therefore, is to be considered a mere accidental complication, and as not causally connected with the injury of the lung.

Doubtless other cases have been recorded which have escaped my attention. I have purposely omitted such as were the result of gunshot injury.

Cases of Rupture of the Lung.

No.	Sex, age, etc.	Mode of injury.	Result.	Author.	Reference.
1	Male, —.	Run over by wheel of mail-coach.	Died, ¾ hour.	R. W. Smith.	*Dublin Journal of Medical Science*, vol. xviii. p. 149.
2	Female, —.	Not stated.	Died, ——.	Id.	Ibid.
3	Male, —.	Not stated.	Died, ——.*	Id.	Ibid.
4	Male, 38.	Squeezed between wheel and post.	Recovered, 5 weeks.	Saussier.	Gosselin, *Mém. de la Société de Chirurgie de Paris*, t. i. p. 224.
5	Male, 10.	Run over by carriage.	Died, 2 days.	Bermond.	Ibid., p. 236.
6	Male, 22.	Fell from second story of a house.	Recovered, 1 month.	Gosselin.	Ibid., p. 202.
7	Male, 12½.	Squeezed by wheel of wagon.	Recovered, 25 days.	Id.	Ibid., p. 210.
8	Male, —.	Run over by wheel of cart.	Died, soon.†	Watson.	*Treatise on Homicide*, etc., Edinb., 1837, p. 100.
9	Male, 7.	Run over by wheel of cab.	Died, 2 days.	Johnson.	*British Medical Journal*, March 5, 1859.
10	——, —.	Similar case to the preceding.	Died, 2 hours.†	Poland.	*Holmes' System of Surgery*, 2d ed., vol. ii. p. 616.
11	Male, 24.	Run over by wheel of cart.	Died, 10 days.	McDonnell.	*Dublin Quarterly Journal of Medical Science*, November, 1864, p. 205.
12	——, —.	Not stated.	Died, ——.	Id.	Ibid.
13	Male, young.	Fell from horse on left arm.	Died, few days.	Gross.	*System of Surgery*, 4th ed., vol. ii. p. 402.
14	Male, 11.	Run over by wheels of wagon.	Died, 3 days.‡	Harlan.	*Proc. Path. Soc. of Philada.*, vol. i. p. 161.
15	Male, 18.	Run over by wheels of cart.	Died, 3 days.	Lee.	*Proc. Path. Soc.* in *Amer. Journ. of Med. Sci.*, April, 1862, p. 419.
16	Male, 32.	Not ascertained.	Died, 5 days.	Ashhurst.	*Vide supra.*
a	Male, young.	Jumped from second-story window.	Died, few hours.‖	Hewson.	*Medical Observations and Inquiries*, 2d ed., vol. iii. p. 384, and *Works*, ed. by Gulliver, p. 297.
b	Male, —.	Fell from height.	Died, few minutes.	Roques.	Gosselin, *loc. cit.*, p. 218.
c	Female, 2½.	Run over by wheel of carriage.	Died, 4 days.	Tatum.	*British Medical Journal*, March 7, 1857.
d	Male, 25.	Not stated.	Died, soon.	——	Ibid., March 5, 1859.

* Prof. Smith records a fourth, similar case, occurring in a dog.
† Complicated by rupture of liver.
‡ Complicated by rupture of spleen.
‖ Complicated by fracture of skull.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF PROFESSOR PANCOAST.

Reported by James Graham, M.D.

CYSTIC TUMOR OF THE THYROID GLAND.

MAGGIE H., æt. 21, has a tumor about the size of a guinea-hen's egg, situated in the middle line of the neck. It is soft, elastic, and unattended with pain, or discoloration of the skin. In deglutition it moves up and down with the larynx and trachea.

It is a cystic tumor of the thyroid gland; and, as it is disfiguring, inconvenient, and a source of mental anxiety, from its constant increase in size, she has come to us from the interior of the State to have it removed.

These growths at times attain a very large size, dipping down deep in the neck between and around the trachea and œsophagus, and, by their pressure, may in the end cause suffocation. Now, why operations upon cystic tumors of this gland should produce more serious results than operations upon those of any other gland of the body, is not known. But such is the case. Its enlargement, when marked, affects the heart and arteries, and, in some cases, causes the eyes to project forward. It is possible that disease of the blood-glands—viz., the thymus, thyroid, and spleen—may have some peculiar, injurious, modifying power over the red corpuscles of the blood, and in this way give rise to the conditions above noted.

In this case a long course of internal medication, aided by external applications, has been employed, but without any benefit; so that the question now is, "What operation can be performed for her relief?" We might puncture the cyst and inject with tincture of iodine, or insert a seton. I have performed both these operations several times, and never lost a case, though I have seen patients thus operated on so far reduced as to make the result for a time extremely doubtful. I prefer, when the tumors are yet of moderate size, the process by enucleation, and have up to this time in that way removed some twenty of these cysts, and with excellent results. As the principal danger to be apprehended is from hemorrhage, we have to be very careful in the use of the knife, for there are a great many large blood-vessels in the immediate vicinity of the wall of the cyst, which must be avoided. It is especially important to recollect, when the tumor to be removed is in the middle line, the occasional existence of a middle thyroid artery, which in one out of perhaps every fifteen or twenty subjects is given off by the innominate, and ascends along the middle of the trachea to the thyroid gland. In these cases the operator should use as much care as the Mohammedan who skates into heaven on a spider's web over the bridge of Al-Sirat.

Now, as the patient is fully under the influence of the ether, I make a double curvilinear incision,—Hogarth's line of beauty,—and, instead of attempting to dissect out the tumor, I cut the bands that confine it. These layers that you see me dividing on the grooved director belong to the isthmus of the gland. We take them up carefully, and divide them one by one, until we have now arrived at the wall of the cyst. I next cut the bands that hold it on either side, and, slipping the pulpy portion of my finger beneath its upper part, I roll out the sac. Although no artery has been divided, the hemorrhage is quite profuse, for the veins are large, and, being unprovided with valves, bleed freely, like arteries. It can readily be controlled, however, by plugging the cavity lightly with lint saturated with the alcoholic styptic, composed as follows:

℞ Saponis (Castile), ʒi;
Potass. Carb., ʒii;
Spts. Vini Rect., fʒiii.

After removal, the tumor resembles very closely, in size, appearance, and consistence, the testicle, but on section it is seen to be composed of numerous small cysts, of the average size of a grain of barley, containing a ropy, yellowish-tinted fluid. These cells are probably the natural, minute, hollow elements of the gland, increased in number and enlarged, possibly from the breaking down of several into one.

[One week after the operation the patient was introduced to the class. The edges of the wound had been brought together by sutures and adhesive straps, and covered with carbolated oxide of zinc ointment. Union by the first intention had taken place throughout.]

INVERSION OF THE TOE-NAIL.

A. T. D., æt. 32.

The nail on the big toe of his right foot is inverted, and has given him great pain for a number of months past. It is the fibular side which is affected, and it is surrounded by fungous granulations, the seat of a foul, irritating discharge. This is generally one of the results of wearing tight shoes: the nail, by pressure, gets too much curved, grows too far down upon the sides, and gets itself painfully entangled in the flesh as it tries to force its way outwards. We will wait until the patient is thoroughly etherized, as the parts are very sensitive, and any operation gives rise to great suffering.

In cases like this I never remove the nail, nor any portion of it; but, as the trouble arises from the edge of the nail dipping down into the flesh at the side of the toe, I cut away the soft parts, and leave the nail in a position where it can do no harm. Thus, with a sharp, double-edged knife, I expose the offending portion of the nail, by cutting away all the overlying structures; then, raising up its free edge, and separating it thoroughly from the parts below it with the thin handle of a scalpel, I slip beneath it a strip or two of adhesive plaster, and carry the ends beneath the ball of the toe and round upon the metatarsus, so as to force the soft parts down and the nail up. When the parts heal, the side of the nail will be free from any covering. One great advantage of this operation is that the patient is almost immediately enabled to attend to his business. I keep the parts covered for several days with a strong aqueous solution of subacetate of lead and laudanum.

[Two weeks later he walked into the room, with his shoes on, and said he felt no further inconvenience.]

CONTRACTION OF THE FINGERS.

This little boy, two years of age, was burnt severely in the palm of his right hand, two and a half months ago, by his clothes taking fire, and the resulting cicatrix has contracted his fingers into rigid, immovable claws. You will recollect a similar case operated upon a few weeks ago, the result of which was very gratifying. We will give him ether and repeat that operation.

As the palm is contracted and small, we will content ourselves to-day with operating on two of the fingers. I make a V-shaped incision, with the base at the metacarpo-phalangeal articulation of the index finger, and the apex extending well into the palm; then dissecting up this flap, which is cutaneous, and does not expose the tendon, I forcibly straighten the finger, which carries the flap with it; and when we approximate the parts, you see that the point of the flap occupies the position in which the base was a few moments ago. We will now treat the middle finger in the same manner, and secure the flaps in their new positions by means of interrupted sutures, and bring the edges of the wounds in the palm together as neatly as possible; then apply a splint with finger supports to the back of the hand and forearm, securing the phalanges to the fingers of the splint with adhesive plaster, and cover the wounds with carbolated oxide of zinc ointment.

[The after-treatment was carefully superintended, and in the course of a few weeks the child had good use of the first two fingers of its hand.]

IODIDE OF IRON AS A REMEDY IN INCONTINENCE OF URINE.—In the *Medical Times and Gazette* of December 17, Dr. John Barclay, after a very long list of the "constitutional, moral, mechanical, and specific" remedies and methods of treatment in this disease, says, "I have tried several of the above remedies, and, before I stumbled upon the syrup of the iodide of iron, found atropia or belladonna by far the most certain and trustworthy. Tincture of iron is much employed, but after frequent and persevering trials with it I have been always disappointed. During the past two and a half years twenty cases of incontinence of urine have been treated by me. The medicine invariably prescribed has been syrup of the iodide of iron alone, and, so far as I know, there have been no failures. I have notes of all the cases, but only eleven in the completed state, since the other nine, who came from a distance, did not return to say what was the result. The probability is that they were cured, otherwise they would not have been got rid of so easily. At all events, the eleven who did report themselves, or who were continually under observation, were all cured, the improvement in several of the cases following so closely upon the administration of the remedy as to leave no doubt that the good effect was due to the syrup. Dr. Manson, of Banff, and Dr. Smith, of Kinnairdy, have both found the medicine equally satisfactory. Dr. Smith says that he tried it, only a fortnight ago, on a boy, who for a long time had been a sad martyr both to diurnal and nocturnal incontinence, and who had resisted all other remedies, but who, upon giving him the iodide, was in two or three days almost well." The doses given were from fifteen minims to half a fluidrachm three times a day, according to age.

MIGRATION OF WHITE BLOOD-CORPUSCLES.—Dr. Caton, of Liverpool (*The Academy*, No. 17, for February 1, 1871), has contributed to *Humphry and Turner's Journal of Anatomy and Physiology* for November, 1870, the results of his examination of the blood-vessels of the mesentery of frogs, and corroborates in all essential points the observations of Addison, Cohnheim, Stricker, and others as to the escape of white blood-corpuscles through the walls of the smaller arteries and capillaries. Dr. Caton operated on nearly a dozen frogs in succession without seeing anything more than—first, a dilatation of the blood-vessels; secondly, a gradual retardation of the flow of blood till complete arrest occurred, the parts being always considerably congested; and, thirdly, a tendency of the white blood-corpuscles to arrange themselves on the inner surface of the vessels, presenting at the same time active amœboid movements. In no instance was the passage of blood-corpuscles through the vascular walls observed. Later, however, when operating, near the commencement of summer, on strong, healthy frogs, the migration of the cells was distinctly witnessed; and he gives sketches of the forms assumed by the corpuscles thus traversing the walls. He has not observed any migration of red corpuscles. Fish did not prove suitable subjects, but the migration process was observed in perfection in tadpoles.

INCONTINENCE AS A SYMPTOM OF RETENTION (*British Medical Journal*, January 21, 1871, p. 60).—Mr. Hutchinson gives several cases of incontinence associated with stricture. "It is easy to see," says this author, "how insidiously serious disease might in this way be brought about. In one of the cases alluded to, the patient had fatal disorganization of the kidneys induced before any obstruction in the urethra was suspected. So misleading is the symptom of incontinence to the patient himself, who never dreams that while his urine escapes freely there can be any accumulation, that it becomes of the greatest importance for medical men to be on the alert as regards it."

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EDITORIAL.

HABEAS CORPUS.

WE take the opportunity furnished by a recent occurrence to speak of an operation of law, involving at once the welfare of the helpless and stricken, the peace of families, and the honor and usefulness of the medical profession. What we are about to say may have no practical effect, but silence might be construed into willing acquiescence in a proceeding fit only to excite disgust and indignation.

Five or six weeks ago a writ of habeas corpus was issued by one of the courts of this city, for the purpose of procuring the discharge from the custody of the Pennsylvania Hospital for the Insane of the wife of a life-long resident in this community, known to everybody, as respectable, as honest, and as free from reproach as any other in it. She had been in that institution several years, the circumstances were well known to a large circle of relatives and friends, and no essential improvement in her condition had occurred. A case more free from suspicious circumstances could hardly be imagined; and of course the proceeding was well calculated to astonish and perplex all to whom the parties were known.

On the hearing, it appeared that neither the relator, as he is technically called in the legal forms, nor the gentleman whom he had induced to co-operate with him as counsel, had seen the lady, or been requested by her or by any friend or relative to institute this measure. In his return to the writ, Dr. Kirkbride stated that she had authorized no such step in her behalf, that she utterly refused to come to court, and that he was unable to bring her, except by main force, which he was unwilling to use. The court (Judge Allison) declined to proceed in the absence of the patient, and order was given that the corpus should be produced nolens aut volens. Accordingly, she was brought to the street, but positively refused to leave the carriage; whereupon the court, by mutual consent, directed the gentleman acting as her counsel, accompanied by the District Attorney, who happened to be present, to visit her and hear what she had to say. On their return, the counsel announced as the result of the interview, that he believed her to be sane on all subjects but one, and that he should abandon any further action in the case. Of course, the lady was remanded to the hospital; and then followed a round of explanations and apologies from the counsel, and of comments from the court, from which we may learn on what pretences the machinery of the law may be set in motion to abolish the most sacred rights of families, and how the parties concerned are expected to demean themselves under the operation.

In justification of his course, the counsel stated that, in order that he might not act without due warrant, he went to the hospital, accompanied by a female physician, for the purpose of seeing the patient and examining her mental condition; that his request for an interview was refused by the officers of the hospital; that subsequently, accompanied by his fidus Achates, the relator, he paid a visit to the husband, who, on learning their errand, ordered them out of the house; and, thereupon, that he was obliged, as a last resort, to apply for the writ. He acknowledged that he had conferred with no blood-relation of the patient, and the only reason he offered for supposing her to be wrongfully detained was that he had been told that her husband had told somebody else that he had shut her up because she spent too much money and refused to take the medicine that was ordered for her. Such were the grounds on which the gentleman saw fit to invoke the most prompt and potent agency of the law for annulling a measure that had been suggested by the best medical advice, and taken in strict conformity to the requirements of law.

Judge Allison, in his closing remarks, administered a gentle admonition to the officers of the hospital touching their refusal to allow an interview between the lady and the counsel. He intimated that members of the bar are entitled to privileges, by virtue of their calling, that might fairly be denied to others, and that a more indulgent practice on the part of the officers might save them from some trouble. Now, so far as this had reference to their general practice, it was without application, as this was the first case in the whole existence of the hospital where the privilege in question had been withheld. The freest possible intercourse has always been allowed between patients and persons claiming to be their counsel. It is only questionable whether the officers of the hospital have not too readily yielded to such demands, and thereby betrayed, in some measure, the sacred trust confided to them as guardians and protectors of their patients. Many of the insane have a mania for buying and selling, and engaging in various business transactions; and with a lawyer to help them, who may even be perfectly honest and mean no harm, they are enabled to embark in projects that seriously embarrass their fortunes. We have known some sharp practice of this kind within hospital walls. A better knowledge of the history of this case would have led the court, we suspect, to view the course of those gentlemen in a different light. This patient had been the subject of the same judicial process, some nine or ten months before, instigated by the same relator, who admitted then, as he did at this time, that he had never seen nor had any communication with the patient, though in his petition he had asserted just the con-

trary. Of course, the judge dismissed the case with some remarks not very complimentary to the relator. A repetition of this impertinence, following so soon after the first, was very naturally regarded with little favor by the officers of the hospital. They felt, and very justly too, that their patients and their patients' friends have rights as well as members of the bar, and that a proper sense of self-respect forbade them to offer any facilities to a movement which was destitute of the least real foundation, and only calculated to annoy and disturb a lady intrusted to their charge. And even had they consented to an interview, and these persons had gone away satisfied that the patient was insane and a fit subject for a hospital, this would not have secured them against a repetition of the same meddlesome interference as soon as the relator could enlist some other "counsel" in his schemes.

The tendency of Judge Allison's advice is to encourage the very evil we are deprecating. Is it not equivalent to conferring on every lawyer in the land a sort of roving commission to roam at will through the wards of our hospitals in search of fitting subjects for the writ? The mischief that would thus be done—the agitation and distraction spread through a large establishment, the distress inflicted on those who, after exhausting the resources of affection, find themselves obliged at last, with sorrow and anguish of heart, to consign some loved one to the ministry of strangers—Judge Allison would deplore, no doubt, as much as any one; and we are sure it must have been through inadvertence that he offered the slightest encouragement to practices likely to produce such lamentable results. It seems to us there has been too much of this already,—enough to bring dismay into every household from which some beloved member has gone out for the benefit of such ministrations as only a well-managed hospital can furnish. Surely it is incumbent on those whose position gives them any influence in these matters to consider, not how they shall encourage it, but rather how it may be kept within the limits of decency. Within the last fourteen months, the writ has been served on Dr. Kirkbride five times, summoning him to appear in court with certain persons and show cause why the latter were deprived of their liberty. There was no more occasion for inquiry in these cases than in the three or four hundred others around them. In all but one, the process originated in the machinations of that same intermeddler who figured so prominently in the last. In the three cases that were heard to the end—for in the other two the proceeding broke down and the counsel withdrew—it was most satisfactorily shown that the patients were insane, and could nowhere else be rendered so comfortable as in a hospital. Some idea of the annoyance produced by these causeless proceedings may be gained from the fact that on eight or ten consecutive Saturdays, in one case alone, the officers of the hospital were obliged to transport themselves and their patient back and forth between the hospital and the court-room; and yet, after all this pother,—with testimony of witnesses, speeches of counsel, and judgments of the courts,—the patients were all remanded to the hospital.

One good at least has resulted from these transactions. They have proved a triumphant vindication of the institution from the charge of holding in custody persons not insane. Judge Allison was pleased to say that, on the strength of considerable knowledge of its management, he believed it to be free from all cause of reproach on that head. He might have said with equal truth that the record of every other hospital in the country is as fair as that; and we say here and now, that the vulgar notion of sane people being shut up in hospitals for the sake of their money, or for something worse, is nothing better than a bugaboo story for frightening children that have got their growth. It never had the shadow of a foundation, and originated solely in the distempered fancies of the insane themselves, who are unconscious of their infirmity, and can see no motive for their confinement but a bad one.

The judge took occasion to remark that the community is sensitive on this matter of confining the insane. Let us assure him that there is also a sensitiveness among the friends of the insane, far more worthy of consideration than the prejudices that have been engendered by novel-writers and itinerant lecturers. The tendency of these legal proceedings is to increase the reluctance naturally felt by families to place their insane members beyond their immediate control, and induce them, all the more strongly, to try every other means before sending them away, even that of keeping them in close confinement in their own homes; and that means, in a room stripped of its furniture, the windows screened and the doors battened, while the wretched patient, once, perhaps, the life and joy and pride of the house, is chained to the floor or tied to the bedstead. Let it be well understood that the writ is to be frequently issued, even on the most frivolous pretexts, and we may be sure that the proportion of recent cases admitted into our hospitals will be greatly diminished. Thus, the benefit of treatment in the early stage of the disease, when alone it is curable, is lost, and the patient drifts into that incurable condition which is beyond all the resources of art.

We do not suppose the evil in question will ever be entirely prevented so long as the world abounds with mischief-makers, but we believe it would be materially lessened by the exercise of a little more discretion and right feeling on the part of those who partake in the administration of the laws. The judges say they are obliged to issue the writ when it is called for,—that the law is imperative, and they must needs obey. We are aware that the act of 1870 declares that they *shall* issue the writ. In the original draft of the act, the "Project of a Law" submitted by the Medical Society of the State of Pennsylvania was followed, in which it was left to the discretion of the judge either to issue the writ or appoint a commission to make inquiry. At the last moment this was changed, and the existing provision, rendering the issue of the writ imperative, was foisted into the bill by some of those self-appointed apostles of

human liberty who are always infuriated by the simple mention of insanity, like a bull at the sight of scarlet. It is not for us to gainsay the view which the judges take of their duty under the act of 1870; but, though silenced, we are not satisfied. The great writ was designed to relieve the oppressed and promote the cause of justice, not to heap affliction on those who have already more than they can bear. If used for the latter purpose, no act of the Legislature can debar the courts from saying so in unequivocal terms. A few rebukes like that uttered by Judge Paxson in the first abortive hearing of this case would greatly diminish this class of applications for the writ. In the present case, the judge intimated that he would be justified in throwing the costs upon the relator. If this were once actually done as well as threatened, it might have a most salutary effect if the party were amenable to such a penalty; but these people are generally as weak in purse as they are in intellect.

The writ is never applied for without the aid and counsel of some member of the bar. To those who are accustomed to make some account of the moral complexion of the causes they undertake,—and it is such only that we now address,—we would suggest that they make some preliminary inquiry before lending their aid in cases of this kind. Let them consider that to drag from his seclusion the poor victim of mental disease, already tortured beyond measure by apprehensions of coming trouble, and subject him to a judicial proceeding which, to his morbid imagination, would seem like a trial for a criminal offence,—a mistake the more easily made by finding himself surrounded by criminals, with the usual appendage of roughs and loafers always loitering about a court-room,—let them consider, we say, that this is one, though by no means the only one, of the wrongs they are liable to commit by precipitate action. They may always ascertain the essential facts of the case, if they really wish it. The friends of the patient, the physicians who gave the certificate, and the officers and managers of the hospital, would gladly supply them with all the information they possess. Of course, we suppose that they have some faith in human honesty; that they are not swift to believe that these different parties, with interests and feelings so diverse, and characters, probably, without a blemish, would join hands for the purpose of committing an infamous wrong. And if, after all, they are satisfied that there is ground for suspicion and a fair occasion for inquiry, let them bear in mind that they are not obliged to resort to the writ to accomplish this purpose. In this State, at least, the courts are always ready to appoint a commission who would visit the patient, hear the evidence, and report the results of their examination to the court. Thus, every rightful purpose would be answered, while the patient would be spared the exposure and publicity of a trial in a public court. By this course the right will be made to prevail, and no harm be done to any one. On the other hand, they may, if they please, spurn all compromise of their professional privilege, and wield the power which the law places in their hands, utterly regardless of the risk they run of doing more mischief than they can avert.

Here, then, is the alternative distinctly made, and it becomes a matter of serious consideration, both to the medical and legal profession, which branch of it they will choose. Are courts and counsel ready to sanction the course pursued in this case? Is it their belief that the statements of physicians respecting their patients are totally unreliable?—that the husband who puts his wife away from a home which for many years they had enjoyed together, in those waning years when life has but little else to please besides domestic joys, is governed, presumptively, not by an inexorable necessity, but by the paltry consideration of saving a few dollars? Are counsel willing to say that the idle gossip, the ill-natured remarks always floating about among the acquaintances of an insane person are ample ground for trampling upon the sanctities of the private circle, and dragging the wretched maniac from the quiet and seclusion of the asylum into the glare of a court-room, to be put upon trial like an indicted felon? Are they willing to assume the risk of dealing a fresh blow at a stricken circle, and of furnishing a distracted mind with new occasions of excitement and apprehension? All this they may say and do, if they please. On a strict construction of their professional rights, they may legitimately avail themselves of every means which the law places at their disposal, disregarding every consideration but that of promoting the schemes of their employers. They may do it,—as we would fain believe was done by the counsel in the present case,—not for the purpose of committing an intentional wrong, but with the idea that they are vindicating the majesty of the law by triumphing over all the devices of professional ingenuity. Let them remember, however, that, by whatever motives they may have been governed, they render themselves fully responsible for the consequences of their action. If that is precipitate, ill advised, arbitrary, reckless, then no allowable construction of their rights can prevent any mischief that may ensue from being justly laid at their doors.

THE PENNSYLVANIA HOSPITAL.

THERE is no other institution in Philadelphia in which the interests of the medical profession have centred for so long a time as the Pennsylvania Hospital. Foremost among its founders was a physician, and its prosperity ever since its establishment has been largely due to the interest which the profession of this city has always manifested for it. In less than twelve years after its corner-stone was laid by Benjamin Franklin, a course of clinical instruction was given by Dr. Thomas Bond in the wards of the hospital; and there is reason to believe that even earlier in its history students in physic followed the practice of the attending physicians and surgeons. It is certain, however, that from 1766 down to the present time clinical lectures have been given with more or less regularity,—a period extending over

more than a hundred years, and longer than that during which medical lectures have been delivered in any other building, and, we may add, institution, in the country, with the single exception of the University of Pennsylvania, which has precedence in this respect only in consequence of its fusion with the College of Philadelphia in 1791. The prosperity of Philadelphia as a seat of medical teaching has been largely owing to the excellence of the clinical instruction given at the hospital, and the graduates of her schools have always recalled with pleasure the time spent within its walls. With such pleasant recollections of its greatness, we cannot look with equanimity or indifference upon its present decline in popularity with students.

In the early part of November, 1869, nearly five hundred tickets were sold, and we are told that on one or two occasions that number of students actually assembled in its amphitheatre,—constituting, it is believed, the largest class in attendance upon clinical lectures in the world. During the past winter less than two hundred students attended the clinics. Why has this change occurred? More favorably situated than any other hospital in the city, within ten minutes' walk of the two great schools of medicine and of the homes or boarding-houses of the students, with precisely the same medical staff, many of the members of which are popular teachers, and affording opportunities for clinical study unsurpassed elsewhere, the change since last year seems incomprehensible.

We can only regard it as one of the results of the action of the contributors to the hospital, who, at their last annual meeting in May, practically decided that the medical staff, comprising the only officers of the hospital who are at all fitted to decide questions pertaining to medical teaching, should have no voice in determining them. We know that it is a prevailing impression in the community that students are deterred from coming simply because women are now instructed in its wards. This petty feeling has, we know, no existence. Nor was there at any time any desire on the part of the students to prevent women from studying medicine, although this has, time and again, been asserted. The position which they took last year—and we have never seen it successfully assailed—was that clinical instruction should not be abridged in consequence of the presence of women. The tickets had been bought with the implied, if tacit, understanding that the cases exhibited and lectured upon should be as varied as they had always been, and the disturbances which took place upon the appearance of the students of the Women's Medical College were in great measure due to the ill-advised announcement which was made to the class that cases of venereal disease, or those involving exposure of the person, could no longer be shown.

There is a point which seems to have been systematically ignored by the advocates of Women's Rights, and that is, that there is no necessity now, nor has there ever been any, for women who desire to be instructed in clinical medicine to attend hospitals in which male students are taught. The Women's Medical College is situated in a part of the city unprovided with a dispensary, with the exception of the one attached to it. During the time it has been in existence, dispensaries have started up in other parts of the city, and have attracted a large number of patients. The hospital attached to the women's college has also, within the past few years, been the object of liberal bequests, and, with the interest which is manifested in it, there ought to be no difficulty in procuring such a subscription-list as would insure its permanent success. Why, then, should women continue to force themselves upon teachers who are not interested in their progress, and who can see already, in this attempt to force them into a profession for which they are not especially fitted, the foreshadowings of failure?

The mere paucity of the attendance upon the regular lectures of the Pennsylvania Hospital is not the only evil in the present condition of things there. If the class, poor as it is in numbers, was made up of the students of either of the scientific medical schools of the city, the lecturer would at least have the satisfaction of feeling that he was casting seed where it was likely to grow and bring forth good fruit; but we are told that the large majority come from the Homœopathic and so-called Eclectic Colleges,—for what purpose we cannot imagine, unless it be to acquire a right to the certificate of the hospital, which we have reason to believe is not unfrequently made to pass for a diploma, although it is simply a certificate that the student has attended a course of clinical instruction, and may be had without an examination, on the payment of five dollars, by any one who has already bought the hospital ticket.

In other countries the attending physicians to hospitals are remunerated; but in this city and country their services are given gratuitously. Even the money realized from the sale of tickets is, by virtue of long-established usage, appropriated by the Managers of the Pennsylvania Hospital to the maintenance of the library, the fees having been originally relinquished by Dr. Bond and his colleagues for this purpose. This, it seems to us, is an unanswerable argument in favor of the propriety of consulting the medical staff in all matters pertaining to clinical teaching, and of taking its views and feelings into consideration.

In the boards of management of two other of the principal hospitals in the city, physicians have been found most useful and efficient members,—active not solely in carrying out the desires of the medical staff, but also in promoting the comfort and well-being of the patients.

The names of physicians may also be found among those of the earlier managers of the Pennsylvania Hospital; and we are at a loss to know what good reason there could have been for the abandonment of this custom,—especially since there are in our profession gentlemen whose knowledge of hygiene and of the kindred sciences would render them valuable accessions to the Board.

TRANSACTIONS OF SOCIETIES.

REPORT OF THE PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA.

At a meeting of the Pathological Society, held Thursday, March 9, 1871, the President, Dr. John Ashhurst, Jr., in the chair,

Dr. Ashhurst read a paper on *Rupture of the Lung without Injury of the Thoracic Parietes.* (See current number of *The Medical Times.*)

Dr. G. C. Harlan referred to a similar case reported by him at one of the early meetings of the Society,—that of a child who was run over by a wagon. Here the rupture was at the apex of the lung. There was great emphysema, but no fracture of the ribs.

Dr. E. B. Shapleigh said he was familiar with the case reported this evening, and that it had been a matter of interest as to how the patient met with the injury. The lieutenant of police had seen him in apparent health at six o'clock in the evening, so that the injury must have been received between this time and the hour at which he was found the next day. He was also seen to use his right arm at the tavern in the evening.

Dr. W. W. Keen presented the *larynx* and portion of the *trachea* of a child, 3½ years old, upon whom *tracheotomy* had been performed. He first saw the child on the evening of February 28, with unmistakable evidences of pseudomembranous croup. The condition of the child becoming alarmingly aggravated, a consultation was held, in which it was decided to perform tracheotomy. This was accordingly done at 6 P.M. of the following day.

During the operation the only layers recognized, besides the fasciæ, were the muscles and the thyroid veins. No appreciable isthmus existed in the thyroid gland, but two large and turgid veins were seen, one on each side of the median line, just in front of the trachea. A hook having been inserted between them, the trachea was opened, and the tube inserted without further difficulty. During the night brandy and beef-tea were given, and the tube kept open by a feather and a swab on a small piece of whalebone. In spite of this, however, the child's respiration grew rapidly worse, especially after midnight; she gradually sank, and died at 8 A.M., fourteen hours after the operation.

No post-mortem examination further than of the neck was obtained. The larynx and trachea were removed. They were both lined with the thick, tenacious, false membrane, especially the interior of the larynx, and the vocal chords. Around the incision the membrane was removed by the friction of the tube, exposing a highly-inflamed mucous membrane. The false membrane doubtless extended down into the bronchial tubes, as was evinced by the increasing dyspnœa, while the tube was still free, and by its existence low down in the trachea. Its extension in fourteen hours or less to such a degree is worthy of notice, in reference to the prognosis and treatment.

Dr. James Tyson presented for Dr. Wm. Carroll a *chronically-enlarged testicle*, removed by the latter gentleman from an apparently healthy laborer, aged 35, who had gonorrhœa in 1855. He had no trouble in his testicles until March, 1870, when both became swollen, apparently from non-specific causes, the patient alleging that he had had no venereal disease since 1855. Both testicles have since remained chronically enlarged, the right, still remaining, being larger than the left, which was removed about February 22. The skin over the left sloughed extensively, allowing the testicle to protrude. The edges of the scrotum, however, had a tendency to heal.

On March 1, the patient applied to Dr. Carroll for treatment. Finding the testicle quite disorganized, the doctor removed it three days later. The testicle was dissected from its surroundings by the fingers, the cord ligated en masse after the manner of Velpeau, and the organ subsequently detached. There was almost no loss of blood during the operation, and no pain after it. The wound is closing very rapidly.

The specimen was referred to the Committee on Morbid Growths, who reported, March 23, as follows:

"The testicle presented to your committee for examination, is enlarged, and bound by numerous firm adhesions to the tunica vaginalis, so that the serous sac formed by that membrane is almost obliterated. In it are several well-defined yellowish nodules, some as large as a filbert. These portions, when a section of them is placed beneath the microscope, are seen to be in a state of granular degeneration, and at their outer boundary is a rapidly-proliferating fibrous tissue compressing the seminal tubules. From the toughness of these nodules, from their seat,—all in the gland proper and not in the epididymis,—as well as from the microscopic appearances above detailed, your committee believe that the above-mentioned nodules are syphilitic gummata."

Dr. E. B. Shapleigh presented a *tumor of the anterior mediastinum*, with the following history:

Arthur B., house-carpenter, aged 42, died suddenly on the 24th day of last January. Some of his relatives, suspecting death from poison, sent the proper affidavit to the coroner. An investigation was commenced and a post-mortem examination ordered.

I could obtain only a very meagre history of the case. He had always enjoyed excellent health, with the exception of an occasional headache; was constantly at his work; had never complained of pain or other uncomfortable feeling about the chest. As far as I could learn, he had never had occasion for medical assistance since childhood.

Between 4 and 5 o'clock P.M. he left his work and went home. He said that he felt very ill,—had a severe headache. He retired early. Between 9 and 10 o'clock he vomited frequently. He became greatly prostrated, and died without having received any medical aid.

The autopsy was made on the following evening. On removing the sternum and cartilages, this tumor was found in the anterior mediastinum, occupying the usual position of the heart. It covered entirely and was attached to the anterior portion of the pericardium. The heart was somewhat flattened and forced backwards and to the left. It was smaller, and its walls much thinner, than normal. It was quite free. There was no pericarditis. The stomach, liver, lungs, intestines, spleen, and kidneys were in a normal condition. Brain not examined.

I have made no minute examination of the structure of this morbid growth; probably it is an enlarged and diseased thymus gland.

A case similar, but differing in some important particulars, is published in the twenty-first volume of the Transactions of the Pathological Society of London, page 358, under the head of "Lympho-Sarcoma (or Lymph-Adenoma) of the Anterior Mediastinum."

The specimen was referred to the Committee on Morbid Growths, who reported, March 23, that they believed "it to be a sarcoma of the mediastinum, of that variety designated by Virchow as lympho-sarcoma. Sections of it placed beneath the microscope showed round cells of the size and appearance of lymph-corpuscles, together with numerous free nuclei,—all imbedded in a very fine fibrous reticulum. Owing to the large size of the growth, it is very difficult to ascertain its starting point, whether from the bronchial glands, or from the remnants of the thymus. In none of the sections, however, could we find any other structure than that of the sarcomatous growth above described."

Dr. H. B. Hare exhibited specimens including *medullary cancer of the cervix uteri, posterior vaginal cul de sac, left ovary, and neighboring lymphatic glands; fibrous tumor of the uterus; dropsy of the left Fallopian tube,*—from a woman aged 60, who died in the Episcopal Hospital, Feb. 21.

The lungs were healthy. The mitral orifice of the heart was somewhat contracted; one leaflet was capable of nearly closing the entire orifice, while the other was replaced by a few vegetations. The liver was fatty, and weighed four pounds. The spleen, kidneys, rectum, bladder, and right ovary were normal.

The specimens were referred to the Committee on Morbid Growths, who reported, March 23, as follows:

"The cervix uteri and posterior vaginal cul de sac are the seat of an extensive deposit of medullary cancer. The fundus and body of the organ are free from disease. The cavity of the

uterus is somewhat dilated, and occupied by a globular fibrous tumor, about the size of a walnut, having its origin from a narrow pedicle near the right Fallopian tube, which, with its corresponding ovary, was normal in appearance.

"The left Fallopian tube was exceedingly tortuous in its course, and distended with fluid, its lumen being constricted near its passage into the uterus, while the fimbriated extremity embraced the ovary, to which it was adherent.

"The left ovary was enlarged, irregular in outline, and, on section, an opaque fluid could be made to exude, consisting, under the microscope, of polymorphous cells, with large nuclei. •When the structure of the ovary was examined microscopically, it was found to present the characteristic marks of carcinoma,—viz., a stroma formed by trabeculæ of connective tissue enclosing alveoli filled with closely-packed cells of an epithelial habitus."

Dr. Hare also presented a specimen of *cirrhotic liver*, presenting an unusual configuration, the whole organ being of a shape not unlike that of a dog's tongue.

Dr. W. G. Porter presented a specimen of *dissecting aneurism of the ascending aorta*, removed from Phœbe R., a colored woman, about 70 years of age, whom he saw in the service of the Philadelphia Dispensary. When first visited, she was sitting in bed, propped up by several pillows, and complained of palpitation of the heart, shortness of breath, and œdema of the lower extremities. She could give no history of her case; had no family from whom it could be obtained. The woman who occupied the adjoining room said that she had been able to work until about three weeks before, and that she had never known till then that there was anything the matter with her. On percussion, the heart was found to be increased in size. Auscultation revealed a loud, musical murmur over the base of heart and at the aortic cartilage. She was very weak, suffered much with shortness of breath, and for a day or two had been troubled with diarrhœa. The examination was, therefore, not so thorough as it should have been. On the following morning she was found dead in bed.

The post-mortem examination was made on the 23d of February. On opening the pericardium, it was found filled with blood, partly coagulated, and about a pint and a half in amount. The whole heart was increased in size, and the left ventricle was very much hypertrophied. There was an aneurism of the aorta, the opening into which was situated a short distance above the aortic valves. The aneurism was, unfortunately, cut across in taking it out. A rupture of the outer aneurismal wall into the pericardium had occurred, and the vent was almost closed by a partially-organized clot. The aorta was extensively ulcerated, and through one of the ulcerated patches the original rupture had occurred. There were also a few isolated patches of calcification in the aorta.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

At a conversational meeting, held March 8, 1871, Dr. A. H. Fish, Vice-President, in the chair,

Dr. H. V. Evans read a paper on "The Hypodermic Employment of the Sulphate of Morphia, in fifty distinct cases." In not one of them had it ever previously been used. Twenty-three were males and twenty-seven females. The ages varied from twenty to fifty years. The average length of time required by the morphia to produce *positive* effects was twenty minutes, which, when a full dose was employed, lasted from three to five hours.

The heart's action, as indicated by the increased rate and volume of the pulse, was influenced in twenty-five minutes. The rate was generally increased ten pulsations per minute, and continued thus for over an hour.

The increased temperature of the body at the armpits was from 1 to 1½ degrees. This increase was quite constant in chronic and debilitated cases.

In five instances only did the morphia entirely fail in producing its usual results. These were men accustomed to the free use of alcohol.

The younger and weaker the patients, the more susceptible were they found to be to its influence, and females were more susceptible than males.

This mode of using the remedy becomes a perilous one when the patient is under twelve years of age. There is also extreme susceptibility to morphia in organic disease of the kidneys; so small a dose as one-sixth of a grain may, in such cases, produce the most alarming narcotism. In two instances there were evidences of a cumulative effect, symptoms of narcotism coming on five hours after the introduction of the morphia. These were mania-a-potu cases.

In neuralgia and other painful conditions, the nearer the seat of the pain the application was made, the more prompt was the relief: inexplicable as this may be, it was nevertheless, in the speaker's experience, true.

His experience convinced him that the best plan was to dissolve the morphia at the time it was needed. If the action was desired to be prompt, he dissolved the drug in twenty drops of water; but if, on the contrary, it was desired to be slow and long-continued, as in chronic cases, he used but ten drops of the water, and injected, when it was possible, while the salt was merely mixed, and before it was thoroughly dissolved. He thought that in this way we could often gain a much longer continuance of its effects.

Dr. Turnbull, being called upon by the President, said he had little to say except in confirmation of the results obtained by his friend. He wished, however, to give a word of caution to the younger members as regards the dose. It is well to begin with a small one, say not more than one-third of that ordinarily employed internally; and in order to keep up its physiological effect but slight increase is necessary. He did not agree with his friend in the belief that localization of the injection was necessary. He had found his best results follow injections made in the arm over the insertion of the deltoid muscle, selecting the loose and delicate skin.

In certain individuals, abscesses will sometimes follow. There also occurs, occasionally, a hardening of the tissues around the point of insertion, which remains for some time. This, however, is rare, but in one or two instances the speaker had been compelled to paint the parts with tincture of iodine. Some also suffer from headache, confusion of mind, anorexia, nausea, vomiting, etc. He has not found abscess so frequent since the employment of the freshly-prepared solution. He therefore carries the sulphate of morphia in packages of ⅛, ⅙, ¼, and ½ gr., and dissolves it in warm water. He supposes that the deposit of fungi ("penicillum") may have had something to do with producing irritation, as Eulenberg employs the hydrochlorate of morphia, with hydrochloric acid, to prevent this formation.

The use of morphia by the mouth or hypodermically may engender a habit almost as difficult to overcome as the use of alcohol. Most distressing cases have been recorded by Dr. Parrish of Media and Dr. Gibbons of San Francisco. The injections must be carefully reduced in strength without the knowledge of the patient; and Dr. Bartholow recommends the addition of a minute proportion of atropia to the morphia injection, until the effects of the former preponderate. When the patient begins to complain that the injection has lost its peculiar influence, then we may stop almost altogether. The most difficult cases to cure are those in which the syringe is employed by the patients themselves; and for such there is no treatment to be recommended short of actual confinement in an asylum or elsewhere.

Dr. Evans said he had seen but two cases of vomiting directly resulting from this mode of using morphia, but he had frequently and successfully used it to stop vomiting in cholera morbus. He thought that abscesses might originate from a want of cleanliness of the instrument. He considered ½ gr. a heroic dose, which should be exceptional, while ⅙ to ¼ gr. should be ordinarily administered. He never employed the permanent solution, preferring the packages. Especially did he avoid using even as much as half a drachm of water as a solvent.

Dr. Goodell remarked that he used the sulphate of morphia, and carried it in substance, in order to avoid its decomposition, always injecting the required dose in a syringeful of water. In his opinion, this dilution prevents the formation of abscess, for he had never seen more than one resulting from any kind whatever of hypodermic injection, and that one was

due to a solution of belladonna extract, made extemporaneously to meet an emergency. The after-nausea generally yielded promptly to small doses of chloral.

In answer to a question, Dr. G. stated that most of the forms of dysmenorrhœa are relieved during the attack by morphia, given either by the mouth or hypodermically. This could be explained by the threefold action of opium, for it is the best of narcotics, the most efficient relaxant of a rigid cervix, and an excito-motor of uterine muscular fibre, — properties which meet many of the indications in dysmenorrhœa. In the congestive variety, in which the womb throbs like a headache, found usually in fat and plethoric women, chloral with hip-baths answered far better during the attack; but in the intervals the iodide of potassium, saline cathartics, and scarifications of the cervix are of great advantage. On the other hand, the effects of full doses of morphia are peculiarly happy in those nervous and neuralgic varieties of dysmenorrhœa so often met with in pale, thin, tall, and hysterical girls. The menstrual fluid accumulates in the cavity from a spasmodic closure of the internal os uteri, and escapes in gushes at such times alone as the expulsive pains overcome the resistance of such constriction. Opium is here the remedy *par excellence*, for it not only lulls the pain, but also takes away the cause of this pain, by softening down and relaxing the rigid cervix.

Dr. Lee stated that some years since he had had occasion to employ this mode of medication in the case of a very anæmic woman, upwards of sixty years of age, for severe paroxysms of gastrodynia. Relief followed in less than five minutes, and as the injections were made over the epigastrium, he thought this case supported the view of Dr. Evans, that relief was procured sooner, the nearer the point of insertion was to the seat of pain. In reference to the doctor's statement that its use is dangerous in children, he mentioned that a few days before he had used it in the case of a little girl, seven years of age, while under the influence of chloroform, administered for the purpose of reducing a dislocation of the hip of several months' standing, and for breaking up adhesions in the knee-joint. The dose was one-sixth of a grain of the acetate of morphia. It appeared to have so little effect that it was found necessary to give the sulphate subsequently by the mouth before the pain was quieted. In regard to the question of abscesses following its use, he thought that in some persons there seemed to be a constitutional tendency to this result, and instanced a case of so-called spinal irritation in a lady seen in consultation with an eminent practitioner, who had been employing this means for her relief. The patient's arms were quite covered with minute abscesses in every stage of development, and her physician had found it necessary to discontinue the remedy on account of the annoyance which they caused.

Dr. Stetler had never seen an abscess from hypodermic injection, and thought it resulted from wounding some of the subcutaneous tissues. He injects where the skin is thin and loose. He thought it should never be used in the nape of the neck. He had frequently seen nausea and vomiting from the hypodermic use of morphia. In those cases in which it has these effects, it would probably have the same if given in full doses by the mouth. In his own case, a sixteenth of a grain, administered every three hours, nauseates, and, if persisted in for any length of time, vomits. Used hypodermically in his own case, in full doses, it does not nauseate.

Dr. Buck said he had relieved his patients more promptly by the use of a half drachm of chloroform mixed with syrup of ginger and an amount of morphia proportional to the severity of the pain. He had found the chloroform to give almost instant relief, and by the time its effects had passed off, the morphia had been absorbed. His prescription is,—

Morph. Sulph., gr. i;
Chloroform., ʃʒii;
Syr. Zingiber., ſʒii.

S.—A teaspoonful every five minutes until relieved.

Arnica in Pneumonia.—Mr. C. C. Balding recommends strongly (*London Lancet*) the use of arnica (min. x strong tincture every two or three hours) in pneumonia. The pulse should be reduced by it to 60 or 70, and descends at times as low as 40 per minute. The relief is immediate, and marked.

BIOLOGICAL AND MICROSCOPICAL SECTION, ACADEMY OF NATURAL SCIENCES.

At a conversational meeting, held March 6, 1871, S. W. Mitchell, M.D., in the chair,

Dr. J. H. McQuillen, the Corresponding Secretary, presented photographs of the test-diatoms Surirella gemma (the latter exhibiting 91,000 striæ to the inch), from Colonel J. J. Woodward, of the Army Medical Museum at Washington, and moved a vote of thanks for the same, which was carried.

Dr. McQuillen also exhibited half a dozen microscopical slides, handed to him by Dr. R. W. Varney, of New York,— viz.: 1. Transverse section of the maxilla of a cat, with the incisors, canines, and molar teeth in position. 2. Nodule of secondary dentine. 3. Section of hypertrophied root of a molar tooth. 4. Hemipterous insect (Tingis arcuata). 5. Longitudinal section of a deciduous incisor; and, 6, of a molar tooth.

The doctor directed attention particularly to the last-named specimen as of practical importance, bearing upon the diseases and treatment of the teeth. Under the microscope, a fissure, inappreciable to the naked eye, could be seen passing through the enamel, and enlarging into an oval cavity near the junction with the dentine; also a number of interglobular spaces in the dentine, in close proximity to the fissure in the enamel.

This fissure and the interglobular spaces being due to defective formation are therefore *predisposing causes* of decay. While such a fissure would be inappreciable to the naked eye, a delicate probe would readily pass into it, and a tooth found in such a condition should be filled immediately, so as to prevent the development of caries; for so long as acids, decomposed food, and other *exciting causes* are prevented from coming in contact with the defective dentine, the *predisposing* cause remains dormant. This specimen clearly demonstrates the importance and necessity of promptly filling the small cavities found in the depressions on the grinding, buccal, and lingual surfaces of the bicuspids and molars, and on the palatine surface of the incisors and canines.

REVIEWS AND BOOK NOTICES.

The Health and Wealth of the City of Wheeling, etc. By James E. Reeves, M.D., City Health Officer, etc. Second Edition. Baltimore, 1871. Pp. 158.

It would be well for the people of other cities if questions of public hygiene were placed in the hands of such reliable and well-informed health-officers as the gentleman who occupies that position in the thriving town of Wheeling. We do not know if politics regulates the appointment of these officials in West Virginia, as it does elsewhere, or whether, as in some of our large towns, the man seeks the office, rather than the office the man; but we do know that the health of the people is often shamefully neglected through want of foresight, knowledge, and precaution of the very men to whom its preservation is intrusted. Dr. Reeves devotes, in this report, several pages to the consideration of the natural resources of West Virginia, after which he turns his attention to Wheeling, in the very heart of which "whole blocks are built on the site of former swamps, deep ravines, ponds, and sink-holes," and "a considerable part of which originally was but little better than a quagmire." He gives a clear and concise account of the sewerage, drainage, and water-supply, and strongly condemns the use of galvanized iron pipe for conducting water for culinary purposes, the interior coating of which is in a few hours decomposed, forming poisonous salts, oxide, carbonate, and chloride of zinc. Twenty-eight pages, including sixteen of illustrations, sectional drawings, etc., are devoted to the "advantages of the earth-closet." Gas, kerosene, slaughter-houses, manufactories, alimentation, infant feeding, criminal abortion, hospitals, and a dozen other subjects of public interest, also receive ample justice. In fact, there is nothing connected with the material, social, hygienic, or sanitary aspects of Wheeling that is not here presented and very ably discussed. Let the health-officers of cities peopled with their hundreds of thousands imitate his good example!

THE "RUBBER AIR-CUSHION" in the Treatment of Complicated Fractures and other Serious Injuries of the Lower Extremities, with Illustrative Cases. By L. D. MASON, M.D., Adjunct Surgeon to the Long Island College Hospital. Reprinted from the *New York Medical Journal*, December, 1870. 8vo, pp. 12. New York, D. Appleton & Co., 1870.

In this paper, which was originally read before the Long Island College Hospital Association, October 4, 1870, the author directs the attention of the profession to the use of the rubber air-cushion in the treatment of complicated fractures and other serious injuries of the lower extremities. Two cases —one a compound fracture of the leg involving both bones, and the other a compound dislocation of the ankle-joint—are reported, in each of which sloughing of the integument had occurred from pressure, and which were markedly benefited by treatment with this apparatus. It is very simple in its construction, and consists of an air-cushion made of india-rubber, in the shape of a small pillow, of the proper dimensions, to suit the individual case. A flexible rubber tube, about two feet in length, is inserted into the middle of the side of the cushion, its free extremity being guarded by a screw-valve. In order to prevent overheating of the limb, the cushion is covered before application with a stout muslin slip, between which and the surface of the cushion is placed a layer of cotton-batting, a sheet of spongio-piline, or some material of this character.

It can be applied to the limb, placed either in the fracture-box or in the lateral splints; and in each case the pressure can be regulated by the extent to which the cushion is inflated. When it is required, passive motion can be instituted by the inflation and exhaustion of the cushion. It affords uniform support to all parts of the limb, and is particularly adapted to cases in which it is desirable to employ irrigation. We believe that the air-cushion will commend itself to surgeons as a very useful application in injuries of the lower extremities, complicated by severe contusions and lacerations of the soft parts, in which uniform support is desirable, not only for the purposes of treatment, but also for the comfort of the patient.

MATERIA MEDICA FOR THE USE OF STUDENTS. By JOHN B. BIDDLE, M.D. 8vo. Philadelphia, Lindsay & Blakiston, 1871.

This book belongs to a class with which we confess to a total want of sympathy,—the so-called students' hand-books,—short cuts to knowledge,—at once the outgrowth and expression of the American feverishness to "get on,"—the symbols and signs of the great curse of American medicine, the too general belief that deep study and wide knowledge are of but little use in practice; and that whereas from three to five years are requisite for the training of a house-carpenter, one or two are ample time in which to become well skilled in medicine.

We have never closely examined previous editions, but the present is said to be "much enlarged," and is a volume of nearly four hundred pages,—space enough in which to elaborate a treatise of some value on the subject; but the large print, the waste of room in stale, useless wood-cuts, the lack of great condensation, all combine to reduce to a minimum the amount of matter really contained in the volume.

The history, physical properties, and chemistry of the various drugs are meagre enough, but not too meagre to be open to the charge of inaccuracy. To substantiate this, we will simply allude to atropia, castor-oil, and the carbonates of potash. From the account of the first of these, the student would be led to think that the sulphate is not officinal, and that the proper way to make a collyrium is to dissolve the alkaloid itself in water and alcohol or acetic acid. Whereas every one knows that years ago the sulphate was made officinal because it is soluble, and therefore can be used in collyria without the aid of other menstruum than water. Heat, it is said, should not be used in preparing castor-oil, as it renders it rancid! Whereas, in truth, heat is always used in making castor-oil,—even the so-called cold-expressed oil. A high temperature, above 212°, is probably meant, but not expressed.

There are officinal in the U. S. Pharmacopœia three preparations of carbonate of potash,—potassæ carbonas impura, potassæ carbonas, potassæ carbonas pura; the two former containing silicic acid as an impurity, the latter being free from it. No student will ever learn these facts from the pages of the book before us.

Time and space are wanting in which to point out further illustrations of the inaccuracy of the materia medica proper of the book; but it is the therapeutics of the work which especially has astonished us. Close gleaning might enable the student to obtain a large proportion of the essential facts of materia medica from the volume; but study he it ever so closely, studying it *alone*, he must remain utterly unacquainted and hopelessly out of sympathy with modern therapeutics. *O tempora! O mores!* Eighteen lines for the description both of the physiological action of opium, in minute and large doses, and of the symptoms of its poisonous effects!

Moreover, the therapeutics is often inaccurate to the very verge of falsity. Take belladonna,—one of the best known and most closely studied of all our drugs. We quote the passage: "In small doses the effects of belladonna are those of an anodyne narcotic, with little or no action on the circulation, or on any of the secretions, except a peculiar dryness of the mouth and throat. In larger doses it causes dilatation of the pupils," etc. Now, one of the most prominent effects of the administration of belladonna is the great stimulation of the circulation. Nowhere is this mentioned, and, from the above passage, any student would, we think, justly draw the conclusion that it had no such power. We have found in the book much to blame. Is there nothing to praise? Yes: it is a comely volume, and the English of it is fairly good, excepting in the repeated use of the noun alkaloid as an adjective, instead of alkaloidal.

BOOKS AND PAMPHLETS RECEIVED.

Insanity and its Treatment. Lectures on the Treatment, Medical and Legal, of Insane Patients. By G. Fielding Blandford, M.D. Oxon., etc. etc. With a Summary of the Laws in Force in the United States on the Confinement of the Insane. By Isaac Ray, M.D. 8vo, pp. 471. Philadelphia, Henry C. Lea, 1871.

Minnesota as a Home for Invalids. By Brewer Mattocks, M.D. 12mo. Philadelphia, J. B. Lippincott & Co., 1871.

Woman as a Physician. By J. P. Chesney, M.D.

First Annual Report of the Trustees of the New York Dispensary for Diseases of the Skin.

Report of the Board of Health of the City Chicago for 1867, 1868, and 1869, and a Sanitary History of Chicago from 1833 to 1870. 8vo, pp. 330. Chicago Lakeside Publishing and Printing Company, 1871.

GLEANINGS FROM OUR EXCHANGES.

PHOSPHORUS POISONING.—Dr. Max v. Schleiss-Löwenfeld (*Neues Repertorium für Pharmacie*, January, 1871) reports a case of a woman, 28 years old, who, two days (January 28) before coming under observation, had taken, with suicidal intent, the shaved-off heads of three packets of matches. When first seen, pulse was 100, weak; temp., 37°.2 C. Tongue deep red, dry. Abdomen excessively tender in left hypochondrium. She complained of feeling cold and of intense gastric pain. The following day icterus set in, as well as intense pain in right hypochondrium. She had two bright-yellow diarrhœic stools, with tenesmus. Pulse, 128; temp., 36°.6 C. Liver of normal size. She complained greatly of hunger. Feb. 1.—Icterus more general. Pulse, 130; temp. (morning), 40°.2 C.,—(evening), 37°.0 C. Intense hunger. A hard stool, with great constant tenesmus. Great prostration. Feb. 2.—Pulse, 96; temp., 37°.0 C. Great pain in hepatic region. Epistaxis. Two stools, scybalous, with yellow liquid and bloody slime. Feb. 3.—Hepatic pain intense. Bloody discharges from nose, stomach, bowels, and genitals, followed by unconsciousness, collapse, and death in the evening,—five days after taking of poison.

Post-mortem.—Dura mater yellow. Heart normal size, very pale. Interior of arteries deep yellow. Left lung œdematous and deeply congested. Liver markedly diminished in size, with a yellow shining section; very fatty and bloodless. Gall-bladder very small; contains only a little grayish mucus. Spleen large, friable. Stomach with some ecchymosis. Small intestines—mucous membrane swollen, very hyperæmic. Lower portion of large intestine the seat of acute catarrh, with marked ecchymosis.

Microscopic examination.—Epithelium of mucus in gall-bladder and of stomach full of fat molecules. Liver-cells rarely distinguishable; exceedingly fatty. Of the fibres of the musculo-frontalis and psoas with their primitive bundles, some are perfect and distinctly striated, others obscured by numerous internal fat molecules, others contain great fat drops. Heart-muscle largely undergoing fatty degeneration. Spleen, no signs of fatty degeneration.

Both kidneys large, with a pale yellow fatty section. Epithelium swollen, with rounded contour, full of fat-globules.

Abscess of the Mastoid Cells cured by Operation (*British Medical Journal*, January 28, 1871, p. 88).—A female, aged 40, after suffering for eleven months from abscess of the mastoid cells,—during which period hemicrania and general neuralgia of the fifth pair were prominent symptoms,—submitted to the operation of trephining over the mastoid process. The case was under the charge of Dr. F. Buszard, who, in describing his method, says, "I exposed the bone fully by a crucial incision, cutting through the attachment of the sterno-mastoid muscle. A probe was passed through the mastoid foramen, and was found to communicate with the abscess. Pus had been drained off by this opening throughout the history of the case. A small trephine was placed over the foramen, and the outer table of bone removed. At least an ounce of pus escaped. The cavity was then scraped, until the dura mater was reached." The patient made an almost uninterrupted recovery.

Locality of the Sense of Taste.—Dr. Camerer, in the *Zeitschrift für Biologie*, publishes the results of experiments on nine persons, with a tube of about a third of an inch in diameter pressed over different parts of the tongue, into which solutions of salt, sugar, sulphuric acid, etc. were poured to a small height. The gustatory sensibility was found to be seated in the fungiform papillæ, and not in the mucous membrane, and not at all in those portions of the tongue which were devoid of papillæ.

Sulphites in Pyæmia.—Dr. Wm. MacCormac (*British Medical Journal*) says, "Some time ago I had frequent opportunities of trying Prof. Polli's antizymotic treatment by the bisulphites of soda or magnesia. It always appeared to me to do a good deal of harm, and never much if any good. Diarrhœa was induced by it, as well as vomiting, the abdomen swelled up with flatulence, and food was sooner refused."

Permanganate of Potash in Gonorrhœa.—Dr. Thos. Narden commends this drug (*London Lancet*, Dec. 1870) as an injection (gr. v—xv to f℥i) in this disease. Great care should be taken to have dish and syringe clean.

Leeches and Mustard.—A correspondent in the *London Lancet* states that the application of mustard previous to the application of leeches causes them to take hold with great rapidity and avidity.

MISCELLANY.

We are very glad to hear that Baron Liebig is sufficiently recovered from his recent illness to resume his lectures, and very sorry that the health of Mr. James Paget is causing much anxiety to his numerous friends.

Interesting to Obstetricians.—On the 21st of February there was born (foaled, dropped, or whatever may be the proper word) at the Zoological Gardens in the Regent's Park, London, an infant hippopotamus. A writer in the *British Medical Journal* of February 25, perhaps better informed than we as to the manners and customs of hippopotami, thought there might be another interesting little stranger awaiting delivery. (Later advices announce the death of the calf, (?) which was the only one.)

Hospital Appointments Abroad and at Home.—Dr. Duchek has been appointed the successor of the celebrated Skoda in the University of Vienna, and Dr. Richard Liebreich has been elected Ophthalmic Surgeon to St. Thomas' Hospital.

Dr. M. Gonzalez Echeverria has been appointed Superintendent to the new lunatic asylum in New York.

Mormon Precaution.—According to the *Northwestern Medical and Surgical Journal*, "Mormon physicians are forbidden, under a penalty of $1000 and not less than a year's imprisonment, to prescribe any of the more powerful agents known to the medical profession, without first explaining to the patient and his friends their medical properties, and procuring the unqualified consent of all concerned."

The German Army Diet-Table.—According to the *London Lancet*, the Germans seem to be a hardier race than the French. They can eat black bread, the issue of which to the French prisoners was stopped because they could not digest it. They were placed during forced marches on a mixture of peas and meat, which proved an economical and easily-carried ration; more easily carried, we should judge, in the knapsack than in the stomach. For stimuli they had Rhine wine whenever procurable. Additional testimony was afforded to the value of tobacco to men subjected to the hardships of a campaign.

Aid to the Sick and Wounded.—From the same source we get an interesting item as to the proceedings of one of the societies analogous to our own Sanitary Commission:

"The sixth report of the Berlin Society for the Aid of the Sick and Wounded in War has lately been issued. During the half-year ending January 22, 251 consignments of articles had been made to depots, 516 to lazareths, and 52 to armies in the field. The Central Committee had expended about 2,030,000 thalers in the purchase of necessary articles; and much assistance had also been received in the form of numerous gifts of useful materials of various kinds. Among the articles sent out by the committee were the following: 74,000 blankets, 51,000 ells of India-rubber cloth and water-proof sheets, 557,000 woollen stockings, 233,000 pairs of drawers and 137,000 of socks, 196,000 shirts and 345,000 body-bandages, 1,065,000 bandages of all kinds, 69,000 pounds of charpie, 283,000 compresses; together with a large number of surgical instruments and apparatus, including 90,000 packets of Dover's power and of quinine and morphia, 50,000 bottles of laudanum and 10,000 of hydrate of chloral, and more than 3000 pounds of chloroform. The articles sent included also 244,000 hams and pieces of smoked meat, 43,000 pounds of sausages and 13,000 of extract of meat, together with 1,000,000 bottles of wine, cognac, arrack, liqueurs, brandy, etc."

Statistics of Suicide.—According to the *British Medical Journal*, "in analyzing the statistics of inquests held, as Coroner of Central Middlesex, Dr. Lankester points out, in his seventh annual report just prepared, that the proportion of suicides to the population in England and Wales is 1 in 12,000, while the proportion in Central Middlesex is about 1 in 13,000. The figures seem to show that of all causes of death suicide is the most constant. The proportion in which the sexes commit suicide is nearly everywhere the same. It may be stated that the proportion of males to females is as five to two. The ages at which suicide is committed are for the

seven years nearly the same. One in twelve are young people under 20 years of age; a larger proportion among people above 60; and the remainder, nine-tenths of the whole, are equally divided among people from 20 to 40 years of age. A further analysis of the cases shows that, as a rule, women prefer taking poison and drowning themselves. Of the twenty-three cases of female suicide in 1868-9, six were from poisoning and ten from drowning. Women seldom cut their throats or hang themselves, whilst, of the sixty-six cases of male suicide, exactly one-half chose these methods of self-destruction. Men are also more given to jumping out of windows and from the tops of high places."

A Chinese Theory of Sudden Death.—A telegraph-line about fifteen miles long having been constructed near Shanghai, the natives supposed that the messages were carried along the wires by devils in the employ of the foreign barbarians. To this they made no objection, until a Chinaman chanced to die suddenly in a house near which stood one of the telegraph-poles. It then occurred to another native genius (an amateur coroner) that one of the devils had come down from the wire and killed the unfortunate man; whereupon he and his compatriots proceeded to destroy the dangerous apparatus.

Delegates to the Medical Society of the State of Pennsylvania.—The next meeting of the Medical Society of the State of Pennsylvania will be held at Williamsport, June 13, 1871.

The following-named gentlemen are delegates from the Philadelphia County Medical Society:

Drs. D. H. Agnew, W. L. Atlee, L. S. Bolles, L. Curtis, L. K. Baldwin, A. Frické, Wm. Goodell, H. D. Benner, A. H. Fish, J. H. Grove, A. G. B. Hinkle, A. D. Hall, G. Hamilton, W. H. Hooper, W. H. Finn, W. H. Bunn, Jos. A. Landis, H. Leaman, H. D. McLean, A. Nebinger, M. O'Hara, W. H. Pancoast, W. C. Phelps, W. M. L. Rickards, W. M. Welch, John T. Williams, J. T. Walton, C. R. Prall, R. H. Wevill, J. C. Whiteside, J. R. Wells, and T. J. Yarrow.

The *ex-officio* delegates from Philadelphia are Drs. S. D. Gross, Laurence Turnbull, Wm. B. Atkinson, Wm. Mayburry, and H. St. Clair Ash.

Delegates to the American Medical Association.—The following-named gentlemen have been duly chosen by the College of Physicians of Philadelphia to represent it at San Francisco in May: Drs. George B. Wood, Alfred Stillé, S. D. Gross, W. S. W. Ruschenberger, F. G. Smith, S. W. Mitchell, J. M. Da Costa, John H. Brinton, Wm. Goodell, W. S. Halsey, J. M. Adler, R. M. Townsend, R. H. Townsend, W. W. Keen, O. A. Judson, Isaac Ray, Horace B. Hare, and W. F. Norris.

Meteorological.—The mean temperature of the month of March just past, according to the record kept at the Pennsylvania Hospital, was 48.7°, being higher than that of any corresponding month for eighty-two years.

The average temperature of this month, in this latitude, is stated at 39.2°. The lowest recorded mean was in 1843,—30°; the next, in 1856,—32.85°.

The mercury did not descend in March of this year below 34°; in every other year of which we have any data it fell below 32°. We cannot but think that these facts must have had a traceable influence upon the health of the city.

Mortality of Philadelphia.—The following statements are condensed from the returns made to the Health Office:

Interments for the week ending March 25, 1871 315

Adults, 174
Minors, 141

The causes of death were reported as follows:

Diseases of Respiratory Apparatus (Consumption, 49)	85
Diseases of Brain and Nervous System	55
Debility, 16; Marasmus, 6; Old Age, 13; Inanition, 2	37
Zymotic Diseases	28
Diseases of Abdominal Organs	28
Diseases of Organs of Circulation	18
Stillborn	19
Casualties, 6; Suicide, 1; Gunshot, 1	8
Cancer and allied diseases, 10; Scrofula, 3	13
Unclassifiable, 22; Unknown, 2	24
	315

Interments for the week ending April 1, 1871 261

Adults, 140
Minors, 121

The causes of death were reported as follows:

Diseases of Respiratory Apparatus (Consumption, 50)	85
Diseases of Brain and Nervous System	46
Debility, 10; Marasmus, 7; Old Age, 9; Inanition, 2	28
Zymotic Diseases	13
Diseases of Abdominal Organs	31
Diseases of Organs of Circulation	14
Stillborn	19
Casualties, 7; Suicide, 2; Murder, 1	10
Cancer, 2; Scrofula, 1	3
Unclassifiable, 7; Unknown, 5	12
	261

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 19, 1871, TO APRIL 4, 1871, INCLUSIVE.

By S. O. 109, War Department, A. G. O., March 18, 1871, the following officers are relieved from duty in the Department they are serving, and ordered to report in person for assignment to duty to the General commanding the Department to which they are transferred:

Ghiselin, Jas. T., Surgeon.—From the Department of the Columbia to the Department of the East.

Byrne, C. C., Surgeon.—From the Department of the Missouri to the Department of the East.

Town, F. L., Surgeon.—From the Department of Dakota to the Department of the East.

Hartsuff, A., Assistant-Surgeon.—From the Department of the Columbia to the Department of the Lakes.

Janeway, J. H., Assistant-Surgeon.—From the Department of the East to the Department of the Missouri.

Happersett, J. C. G., Assistant-Surgeon.—From the Department of the East to the Department of the Missouri.

Brooke, John, Assistant-Surgeon.—From the Department of the East to the Department of the Columbia.

Miller, G. McC., Assistant-Surgeon.—From the Department of the Missouri to the Department of the South.

Lippincott, H., Assistant-Surgeon.—From the Department of the Missouri to the Department of the East.

The officers serving in the Department of the East named in this order will be relieved from duty when those assigned to that Department shall have reported for duty.

Winne, C. K., Assistant-Surgeon.—By S. O. 23, Headquarters Military Division of the Missouri, March 25, 1871, granted leave of absence for *sixty days*, with permission to apply for an extension of *sixty days* to the Adjutant-General of the Army.

Tilton, H. R., Assistant-Surgeon.—By S. O. 56, Headquarters Department of the East, March 20, 1871, assigned to duty as Post-Surgeon at David's Island, N. Y. H.

McMillin, Thos., Assistant-Surgeon.—By S. O. 52, Headquarters Department of California, March 18, 1871, assigned to duty at Angel Island, San Francisco Harbor, Cal.

Hoff, Alex. H., Assistant-Surgeon.—By S. O. 52, c. s., Department of California, assigned to duty at Alcatraz Island, Cal.

Heizmann, C. L., Assistant-Surgeon.—By S. O. 48, Headquarters Department of the Platte, March 22, 1871, to accompany detachment of Fourth Infantry from Omaha, Nebraska, to Louisville, Kentucky, and upon completion of this duty return to these Headquarters; and by S. O. 49, c. s., Department of the Platte, granted leave of absence for *twenty days*.